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## SYLLABUS OF LECTURES ON THE PSYCHOLOGY OF PAIN AND PLEASURE.

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This syllabus principally consists of the substance of a course of lectures on the Psychology of Feeling delivered at Clark University during the past academic year.

§ 1. The department of study which it is here proposed to pass in review has for its subject-matter the facts of mind known as agreeableness and disagreeableness.

While common usage is apt to confine the terms pain and pleasure to particular varieties and marked degrees of agreeableness and disagreeableness, that the words at least denote species of the latter genera, will hardly be denied; and without doing much violence to the habitudes of English speech, their acceptation may be extended to cover any kind and any grade of the agreeable and disagreeable respectively. (The corresponding words in French, German and Italian have been used of late by many writers in this widest possible sense. Cf. Fechner: "Vorschule der Ästhetik," 1876, Vol. I. p. 11.)

§ 2. In uniting the investigation of these two mental facts into one branch of inquiry, it is tacitly assumed that they are species in a psychological genus. This assumption becomes explicit in the use of terms like the French "Sensibilité,"

the German "Gefühl," and the English "Feeling." Yet these words are of ambiguous import, having at least two other possible meanings besides that of a psychological genus including pain and pleasure as species. "Sensibilité" might, from its etymology, mean that which is presented to us in the sense; and "Feeling" is sometimes used for presentation in any form. Again, all three of the words can be taken to mean emotion, a phenomenon of mind which, although it may always be either pleasant or unpleasant, is different from the facts of pleasantness and unpleasantness themselves. For the generic fact of which these latter are species, there exists in English no unambiguous name. Moreover, were there such a term, its use to describe the domain of inquiry here had in mind would involve the assumption that pain and pleasure are the only species in the genus. While the existence of the latter is not, at present, often questioned, it cannot be regarded as settled that this dichotomy is an exhaustive division of it. May there not, or must there not, exist, it has been asked, a "feeling" of Indifference as well as "feelings" of Pain and Pleasure? (Cf. the discussion on Feeling as Indifference between Professors Bain, Sully and others: *Mind*, Vols. XII., XIII. and XIV.) Yet the doubt itself as to the existence of the former species of the genus here called "feeling," gives justification for taking the latter pair as the object of a separate inquiry.

§ 3. A fundamental psychological doctrine, to which the writer holds, affirms the ultimate categories of psychical fact to be three in number: (1) presentation, or mental content in general, whether sensory, emotional or representative; (2) will, or the fact of resolve; (3) the generic fact of which agreeableness and disagreeableness are special forms. The mental life may, on this view, be looked at in three aspects: as the theatre of thought (in the widest sense), of act (whether the psychic facts known as desire and impulse involve this element or not, becomes a question of interest), and of pain and pleasure (possibly also, indifference). The domain of inquiry here to be reviewed assumes, in consequence, the importance of at least the main element in one of three grand divisions of psychology. We are led to look for manifestations of the pain and pleasure genus in any manifestations of mind, to think of the sphere of our inquiry into it as co-extensive with the psychic life itself. (In the "Vorschule der Ästhetik," Vol. I. p. 36, Fechner remarks that the term Hedonik has been proposed to designate the general doctrine of pleasure and pain, "a doctrine which traces out all bearings, inner and outer, of pleasure

and pain in the universe; in their relations, whether of notion or of principle, enchainments, modes of origin and of application.”)

§ 4. Although the worth of things is admitted to depend in good measure upon fact of the pain and pleasure genus with which they are complicated in experience, the doctrine of this element of mind cannot be said to have reached either the volume or the solidity of other doctrines of psychology less intimately connected with values. There are unusual difficulties surrounding the investigation of the agreeable and disagreeable which go far to explain this fact. It may be claimed that no state of pain or pleasure of higher intensity can immediately become the object of introspective examination: it must be scrutinized from a distance in time. Further, if the agreeableness and disagreeableness themselves “are not presented, they cannot be represented,” and “any knowledge we have of them must be in some way constructive or mediate.” (Professor J. Ward: *Modern Psychology, Mind*, N. S. 5.) In a word, the habitude of self-consciousness keeps the psychologist on lower levels of pleasure, while his powers of observation fail him on higher levels of pain, and even the lower degrees he is incapable of studying as he can the facts of presentation. Yet from the application in this field of the varied methods of observation and experiment which have in recent years given so strong an impulse to other branches of psychology, results of value may be expected.

§ 5. The following pages contain a review of some principal topics in the psychology of pain and pleasure, with references to writers. The accompanying scheme is adhered to in the exposition:

## I.—GENERAL QUESTIONS.

### 1. *Psychological*:

- (1) Nature. § 6.
- (2) Logical relations (of resemblance, difference, inherence)
  - (a) to other psychic fact: pain and pleasure are—
    - ( $\alpha$ ) species of presentation. § 7.
    - or ( $\beta$ ) characters of presentation. § 8.
    - or ( $\gamma$ ) the original form of consciousness. § 9.
    - or ( $\delta$ ) fundamentally one with the fact of will. § 10.
    - or ( $\epsilon$ ) independent manifestations of mind. § 11.
  - (b) among themselves. § 12.

(3) Actual relations (of accompaniment, in quality or quantity)

(a) to presentation—

(*a*) nature of the relation. § 13.

(*β*) presentational conditions of pain and pleasure:

Quantitative. § 14.

Psychical aid and conflict. § 15.

Genesis of conditions. § 16.

(b) to will. § 17.

(c) among themselves. §§ 18-20.

2. *Psychophysical*:

Theories of vital hindrance and furtherance. § 21.

Quantitative theories. § 22.

Fechner's theory of stability. § 23.

3. *Philosophical*:

Pleasure and value, §§ 24-25.

II.—PAIN AND PLEASURE IN PRESENTATION.

1. *Normal Consciousness*:

(1) Sensational:

(a) Physical Pain. §§ 26-28.

(b) Bodily cravings. §§ 29-31.

(c) Lower senses. § 32.

(d) Hearing. §§ 33-36.

(e) Sight. §§ 37-39.

(2) Ideal. §§ 40-44.

2. *Special Conditions*:

(1) Morbid:

(a) Melancholia and Mania. §§ 45-46.

(b) Impulsive Insanity. § 47.

(c) The relation of Genius and Insanity. § 48.

(2) Onirotic (*ὄνειρωτικός*, consisting in dreaming). § 49.

(a) Dreaming. § 50.

(b) Natural Somnambulism. § 51.

(c) Hypnotism. § 52.

(d) Shock. § 53.

(e) Narcosis. § 54.

(f) Emotion. § 55.

(*a*) Wonder, Horror, etc. § 56.

(*β*) Love. § 57.

(*γ*) Religion. § 58.

(*δ*) Beauty. §§ 59-61.

The Fine Arts.	§ 62.
Picture.	§ 63.
Sculpture.	§ 64.
Architecture.	§ 65.
Ornament.	§ 66.
Manners.	§ 67.
Dancing.	§ 68.
Drama.	§ 69.
Literature.	§ 70.
Music.	§ 71.

### III.—THEORY OF HABIT.

§§ 72-80.

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#### I.—GENERAL QUESTIONS.

##### I. *Psychological:*

§ 6. (1) Nature. Pain and pleasure are generally recognized as ultimate facts of mind. ("Pain and Pleasure themselves taken pure and apart from all subsidiary determinations are simple, not further analyzable determinations of our soul." Fechner: "Vorschule," I. p. 8.) Yet the question is debated whether each does not exist in different kinds. (Cf. J. S. Mill: "Some *kinds* of Pleasure are more desirable and valuable than others." "Utilitarianism," Chap. II. Professor Ward contra, to whom feeling itself varies "only in intensity and duration." Art. "Psychology," *Encyc. Britannica*, p. 71.) It is customary to speak of them as having a subjective reference in opposition to presentation which is referred to an object. (Cf. Kant: "Kritik of Judgment," Section 3, Bernard's translation: "The green color of the meadows belongs to *objective* sensation, as a perception of an object of sense: the pleasantness of this belongs to *subjective* sensation, by which no object is represented, *i. e.*, to feeling . . .")

(2) Logical relations: (a) to other psychic fact.

§ 7. (a). Pain and pleasure are species of presentation. Locke calls them "simple ideas." ("Human Understanding," Book II. Chap. XX.) The modern assumption of special nerves of pain leads to a classification of physical pain among sensations; but according to Prof. Ward, by a confusion consequent upon "the use of one word pain for certain organic sensations and the purely subjective state." (Art. "Psychology," p. 40.) Pleasure and pain are placed on a footing with other senses by Dr. H. Nichols in "The Origin of

Pleasure and Pain." (*Philosophical Review*, Nos. 4 and 5; criticism by Mr. H. R. Marshall in No. 6 of same review.)

§ 8. ( $\beta$ ). Pain and pleasure are characters of presentation. Utterances of Descartes, Spinoza and Leibnitz may be thus interpreted. According to Descartes (letter to the Princess Elizabeth), "All our pleasure is nothing more than the consciousness of some one or other of our perfections." Spinoza defines pleasure as "a passive state wherein the mind passes to a greater perfection;" and pain as "a passive state wherein the mind passes to a lesser perfection." (*Ethics*, III. Prop. XI.) Leibnitz writes: "Pleasure is the feeling of a perfection or excellence whether in ourselves or in something else. . . . One does not always notice wherein the perfection of agreeable things lies, . . . . meanwhile it is felt by the soul if not by the understanding." ("Von der Glückseligkeit," *Opera Phil.* Ed. Erdmann LXXVIII.) These quotations may be conceived to express the doctrine that presentation of a certain form, viz., inadequate idea, exhibits the characters known as pleasure or pain, according as it involves or tends toward one or the other of two internal determinations, viz., perfection or imperfection. (Yet Wolff bases pleasure on the presentation of perfection, and not on the perfection of presentation—"Pleasure is the intuitive cognition of some perfection or other, whether true or false."—"Psychologia Empirica," 1738, Section 511,—ascribing his definition to Descartes.) The opinion that pain and pleasure are "*quales* of all presentations comprising our psychic life as we know it" has been recently maintained by Mr. H. R. Marshall. *Mind*, No. 56, Oct. 1889.)

§ 9. ( $\gamma$ ). Pain and pleasure are the original content of consciousness, presentation their derivative. This theory has been advanced by Horwicz in his "*Psychologische Analysen*," Vol. I. 1872, Vol. II. 1875-78.) Defining Feeling as "the condition of pleasure or pain with which we accompany various soul processes," he writes, "Feeling is, according to our view, the earliest, most elementary product of our soul-life; it is the earliest and sole content of the consciousness, and the main-spring of the entire soul-development. (II. 1, p. 177.) "Inasmuch as all ideation rests on sensation, it must be traced back entirely to the feeling of the agreeable and the disagreeable. For all sensation is . . . originally feeling; it is only through a set of processes that we have called habituation (active and passive), memory and localization, projection and apperception, that the agreeable and disagreeable, originally only subjective, has become objective perception." (II. 1, p. 4.)

§ 10. ( $\delta$ ). Pain and pleasure are fundamentally one with the fact of will. This is the view of Brentano, who maintains it in Chapter VIII. of his *Psychology*, (1874): "Einheit der Grundklasse für Gefühl und Willen." According to Wundt, feeling is "the subjective completion of objective sensations and ideas," and its examination leads us back to "the original activity of apperception." The pain and the pleasure of sensation is, he writes, "the manner of reaction of apperception upon sensory stimulus." Apperception, further, we know as an "inner activity, and, "this inner activity finally is to be posited as entirely identical with the efficiency of the will." . . . ("Phys. Psych." X. Chap. Section 4.)

§ 11. ( $\epsilon$ ). Pain and pleasure are independent manifestations of mind, not to be referred to any other psychical category. According to the analysis of mind assumed by Kant, in the "Kritik of Judgment," " . . . all faculties or capacities of the soul can be reduced to three, which cannot be any further derived from one common ground: the *faculty of knowledge*, the *feeling of pleasure and pain*, and the *faculty of desire*." (Introduction III. Bernard's tr.) In like manner Lotze recognizes three primitive faculties: of presentation, of pain and pleasure, and of effort. In order to explain the facts, we must conceive that "the capacity to feel pleasure and pain inheres originally in the soul, and that the events of the stream of presentation reacting upon the nature of the soul waken them to utterance instead of engendering them out of themselves; further, whatever feelings may dominate the soul, they do not bring forth an effort,—they become only motives for a faculty of willing already present, which they find already in the soul, without ever being able to put it there had it been lacking." ("Microcosmus," Book II. Chap. II.) This belief in the essential independence of the pain and pleasure genus would seem to be shared by many contemporary psychologists, although Prof. Ward, in maintaining it, writes: "To say that feeling and attention are not presentations will seem to many an extravagant paradox." (Art. "Psychology," p. 44.)

§ 12. (b). Logical relations among themselves. As already noted, pain and pleasure are commonly conceived as species in a psychological genus, which may or may not be thought to include, beside them, the element called indifference. (Yet, cf. Ch. Richet: "Comparer le plaisir et la douleur, c'est déjà presque une hypothèse." "L'Homme et l'Intelligence," Chap. I.) They are further commonly spoken of as opposites, or, at least, contraries; but, in default of further light upon the possible meaning of these terms as applied to the ele-



ments pain and pleasure themselves, we may conclude that their application is to pains and pleasures, the states of consciousness in which these elements occur. (v. § 18.)

(3) Actual relations (a) to presentation : ( $\alpha$ ). Nature of the relation.

§ 13. It is a very common if not a predominant opinion that any element of presentation may be found in a unique way implicated with pain or pleasure, and that the latter exist only in such implication. The view of Lehmann thus expressed, "A state of consciousness consisting of pure feeling does not exist: pleasure and pain are always attached to a presentational content" ("Hauptgesetze des menschlichen Gefühlslebens." 1892, Section 18), is called by him the Kantian theory, on the ground that it was Kant who, in the "Kritik of Judgment," first "emphasized at once the opposition and the close connection between feeling and presentation." The term epi-phenomenon, which is sometimes applied to the pain and pleasure genus, implies etymologically a theory of the nature of the connection between the genus and presentation. Yet in the mind of some who use it, the word may express simply the opinion that while pain or pleasure is always the pain or pleasure of some presentation, not every presentation affords either. The hypothesis that pain and pleasure are species of presentation would lead to a denial of the unique character of their connection therewith, and to its explanation as contiguity (in sensation) and association (in idea).

( $\beta$ ). Presentational conditions of pain and pleasure :

§ 14. That there is any invariable connection between qualities of presentation and pain or pleasure is commonly denied. (*E. g.*, for sensation by Wundt, who concludes "that there are no qualities of sensation that are absolutely pleasant or unpleasant." . . . "Phys. Psych." Chap. X. Section 2; and for presentation in general by Lehmann on theoretic grounds: "Hauptgesetze," Section 216f.) A general principle of the dependence of sensational pain and pleasure upon the intensity of the sensation is exhibited by Wundt (same chapter, Section 1), in a diagram of the following content: as the intensity of any sensation is increased from its lowest point, at which it will neither be perceptibly painful nor perceptibly pleasurable, it will at first be increasingly and later decreasingly pleasurable, then neither pleasurable nor painful, and thereafter increasingly painful to a maximum. Yet the principle does not seem to hold universally. (H. Spencer, "Psychology," I. Section 123, "Such a taste as cod-liver oil is disagreeable, even though slight . . . sweetness is not rendered disagreeable by any degree of intensity.")

Fechner's principle of the æsthetic threshold ("Vorschule," IV.) takes into consideration not only the intensity of a presentation, but the degree of receptivity and of attention to it in the subject. "It is, to wit, a general law holding not only for feelings of pleasure and pain, but also for them, that in order that they should come to consciousness, a certain degree of that upon which the inwardly and outwardly depend is requisite." Any presentation unaccompanied by pain or pleasure, but which needs only an increase of one or other of the above elements to awaken it, he speaks of as "in the direction of pain or pleasure."

§ 15. In the theory of Herbart, pain and pleasure are functions of the interaction of presentations in the soul. ("It is the feeling of pleasure and pain that depends upon the manner in which our presentations occur in consciousness, and are excited to orderly flow." Werke Hartenstein Edn., Vol. VI. Section 108.) The theory conceives of one presentation as either aiding or hindering the rise of another into consciousness, the conditions of pleasure involving the former effect only, of pain the latter also. (See the exposition of Mr. G. F. Stout, "The Herbartian Psychology," *Mind*, No. 52, Oct., 1888, Section 31.) The notions of aid and hindrance may be taken to involve that of a particular kind of difference made in the outcome  $\gamma$  of circumstances  $\alpha$  by the presence of circumstances  $\beta$ . If  $\gamma$  is lessened, retarded, prevented or rendered less likely when  $\beta$  occurs with  $\alpha$ ,  $\beta$  is called a hindrance to  $\gamma$ , or to  $\alpha$ ; if  $\gamma$  is increased, quickened or rendered more likely,  $\beta$  is called an aid to it or to  $\alpha$ . To affirm aid or hindrance it must then be possible to predict a certain outcome to given circumstances; if the basis of this prediction for the course of presentation is experience, its aid and hindrance (in which this theory finds the basis of pain and pleasure), become in general the aid and hindrance of habitudes of the soul. In order to explain the pain and pleasure implicated in simple sensation, Herbart assumes their essential though undiscoverable complexity. (They are to be considered as "arising out of presentations that cannot be specified separately, that are even perhaps from physiological reasons incapable of separate perception." Werke, V. Section 34, VI. Section 108. Cf. Kant in regard to the air-vibrations which are the basis of sensations of tone: "If we assume . . . that the mind not only perceives by sense the effect of these in exciting the organ, but also perceives by reflection the regular play of impressions . . . which I very much doubt . . ." "Kritik of Judgment," Section 14, Bernard's tr.) Nahlowsky, who takes in general the Herbartian standpoint, abandons this explanation of the

pain and pleasure implicated in simple sensation, his substitution for it of a physiological theory implying the opinion that presentational conditions cannot be given. ("Das Gefühlsleben," 2d Edn., 1884. Einleitung III.: cf. Waitz. "Grundlegung der Psychologie," 1849, p. 306.) The theory of Volkmann ("Psychologie," 3d Edn., 1884, Sections 35 and 127) is another modification of the Herbartian view. Prof. Lipps may also be claimed as a representative of the general doctrine basing pain and pleasure upon presentational aid and hindrance. ("Pleasure is everywhere the result of soul-furtherment. Pain the reflex of soul-hindermment . . .") "Grundthatsachen des Seelen lebens, 1883, p. 696.)

§ 16. A genetic theory of the presentational conditions of pain and pleasure is given by Mr. Spencer ("Psychology," Chap. IX., Data of Ethics, Chap. X.), the implication of which is that the painfulness or pleasurable-ness of presentations is ultimately a matter of chance, the existing distribution of pain and pleasure over our experiences being the result of the co-operation of the principle of natural selection with a general law that pleasures tend to realize themselves in animal life and pains to exclude themselves therefrom. To those to whom the conception of chance as the origin of things more commends itself than definite formation, these two principles afford a means by which any observed connection between experiences advantageous to the animal which is their subject and its pleasure, and between experiences disadvantageous to it and its pain, can be explained as originally fortuitous. For such a connection as the first leaves us free to assume that another organic type has existed in the past, differing from that of the present only in the fact that this experience was not pleasurable to it; since, if such a type had existed, the advantageous experience not being pleasurable would have been less realized in its life, and it would have been therefore at a disadvantage as compared with the type we know. That is, had the hypothetical type existed, it would not now exist. In like manner an observed connection between an experience detrimental to an animal and its pain, leaves us free to assume that a type has existed in the past, like it in all respects, excepting in not finding this experience painful. For, being painful, the detrimental experience would have been less realized in the life of the existing type than in that of the other, which would therefore have succumbed to it. That is, had the hypothetical type existed, it would not now exist. The hypothesis of the existence of these suppressed forms is the hypothesis that the connection between pleasure and pain and presentations is to a certain extent a matter of chance. (Cf. C. S. Peirce: "Illus-

trations of the Logic of Science." *Popular Science Monthly*, 1887-88, fifth paper. A chance world contains "every combination involving either the positive or the negative of every character.") To use the customary term, this hypothesis regards the existing distribution of pain and pleasure over our experiences as in some measure an evolution. On the other hand, evidence against the fortuitous nature of the connection between pain and pleasure and presentation is afforded by any cases in which pains are advantageous and pleasures detrimental to the organism experiencing them. These instances offer evidence that to a certain extent pains and pleasures are not matters of chance, have not been evolved. (On limitations of the theory, cf. Schneider, *Freud und Leid des Menschengeschlechts*, 1883, Chap. I.) A question fundamental to the hypothesis is whether the time and space through and over which the various forms of life may be supposed to have existed on the globe is sufficiently great to make possible the production by chance of such relationship as exists between pain and bodily detriment and pleasure and bodily advantage. Further, no evolutionary theory will commend itself to any mind incapable of resting in the conception of chance as the origin of things: (Cf. Lotze: Art. "Leben. Lebens Kraft." Wagner's *Hd. w. b.* 1843, who finds "that absolute law has just as much right to be conceived eternal as absolute lawlessness.")

(b). Actual relations to will:

§ 17. The proposition that the will is a function of pain and pleasure seems to have appeared axiomatic to Schopenhauer: "Was den Willen bewegt ist allein Wohl und Wehe überhaupt und im weitesten Sinne des Wortes genommen." ("Grundlage der Moral," Section 16: Upon this opinion cf. the remark of Amiel: "Pour Schopenhauer le caractère s'identifie avec le naturel, comme la volonté avec la passion. En un mot, il simplifie trop . . . ." "Journal Intime," Vol. II. p. 68.) Many psychologists at present assume the same principle. Mr. Spencer writes: "If we substitute for pleasure the equivalent phrase—a feeling which we seek to bring into consciousness and retain there," etc., etc. ("Psychology," I. Section 125.) Lipps holds that "only that theory is justifiable according to which effort and that which lies at the basis of pleasure and pain, are related as different sides of the same psychic fact." ("Bemerkungen z. Theorie der Gefühle." *Vierteljahrsschrift für wissenschaftliche Philosophie*, 1889, p. 176.) Mr. Hodgson writes: "All choice is a balance and determination between pleasures." ("Theory of Practice," 1870, Vol. I. Section 56.) On the other hand, according to Meynert, the simplest theory

will always be that "in the most complicated, enigmatic and incomprehensible actions of man, the guiding motive is the avoidance of the greater pain." ("Psychiatrie," 1st part, 1884, p. 163.) Prof. James, according to whom "effort of attention" is "the essential phenomenon of will," concludes that "believers in the pleasure and pain theory must, if they are candid, make large exceptions in the application of their creed. . . . Pleasure and pain are motives of only part of our activity." ("Psychology," Chap. XXVI.) According to Lotze, most human behavior is impulsive in nature, involving no exercise of volition. "We are sure of having to do with an act of will only in a case in which the impulses that urge to an action are perceived in clear consciousness, and yet the decision whether they shall be yielded to or not is in abeyance, and falls, not to the power itself of those urgent motives, but to the free determining choice of the spirit independent of them." ("Microcosmus," Book II. Chap. V.) A delicate observation of impulsive as distinguished from volitional avoidance of pain is given in the "Journal des Goncourt" (I. p. 314): "C'est étonnant le matin, quand il faut passer du sommeil à une certitude douloureuse, comme machinalement la pensée retourne au sommeil ou elle se réfugie et semble se pelotonner, pour ainsi dire, dans ses bras." A question fundamental in the subject is that as to the sense in which the will can be said to be a function at all: (Cf. the distinction of Kant between empiric and intelligible character. In "The Dilemma of Determinism," *Unitarian Review*, Sept., 1884, Prof. James gives grounds for a decision in favor of volitional freedom).

(c). Actual relations among themselves :

§ 18. Pain and pleasure are commonly spoken of as opposites or at least contraries. Doubtless it is intended by the use of the latter term to express a generalization akin to the following: If pain and pleasure are together in the mind, the presentation which, upon analysis of the mental state in question, appears as that which we take pleasure in, is always other than the presentation which gives us pain. (Yet this would have been disputed by Herbert, according to Mr. Stout, who gives the conditions which, if simultaneously present, would cause a presentation to be at once pleasurable and painful. *Mind*, No. 52, October, 1888, p. 490.) The source of the predicate of opposition is apparently the common complication of pain and pleasure with bodily movements in opposite directions (flight and approach, contraction and expansion). The idea leads readily, though without warrant, to a theory of the psychical

nature of the pain and pleasure genus, viz., that it constitutes a one dimensional manifold containing, besides different intensities of pain and pleasure, an intermediate element called the "feeling of indifference." (While sensational pain and pleasure are spoken of by Wundt as opposites which "pass over into each other through an indifference point," he interprets the latter as indicating not a form of feeling, but its absence. "Phys. Psych." Chap. X.)

§ 19. The intricate subject of the coalescence of pains and pleasures is studied at length by Lehmann, ("Hauptgesetze," Sections 315-336.) For complex states where both enter, it appears unquestionable "that they do not cancel one another as positive and negative quantities." (Section 336.) Among principles of the combination of pain and pleasure in experience formulated by Fechner, that of *Æsthetic Aid* is to the effect that the amount of pleasure produced by the union of several pleasurable elements is greater than the sum of the pleasures they individually give ("Vorschule," Vol. I. p. 50); that of *Blunting* is to the effect that the pleasurable (and to a certain extent also the painfulness) of a presentation is lessened through the continued or frequent experience of it ("Vorschule," Vol. II. p. 240). According to Lehmann, the phenomenon of *Blunting* is not a real decrease of pleasurable-ness or painfulness, but the result either of a diminution in strength of the presentation itself, or (1) in the case of a pleasure of a gradual accretion of disagreeable elements; (2) in the case of a pain the production of a need of the (originally) painful presentation. ("Hauptgesetze," Sections 248, 253, 254.) The principle of *Contrast* (of which those of *Sequence* and *Compensation* are consequences) Fechner states as follows: contrast occurring when elements of experience are so given in consciousness that their difference is perceived, one can say in general, "the pleasurable gives the more pleasure the more it comes into contrast with the disagreeable, or the less pleasurable; a corresponding principle holding for the disagreeable." ("Vorschule," Vol. II. p. 232.)

§ 20. The possibility of the application of measurement to pain and pleasure, conceiving this as finding the number of times a given unit of either feeling is contained in a certain pain or a certain pleasure, may be denied on the ground that it is impossible to figure to one's self a process of the subtraction of one pain or one pleasure from another. (Cf. the remark of Professor Stumpf as to the impossibility of analyzing a degree of intensity into a lower degree and a remainder: "As far as I can see it is impossible to imagine separately the amount of intensity which must be added to the lower degree to give the higher." "Tonpsychologie," I.

1883, p. 121.) What meaning quantitative judgments, judgments of greater or less, may have in the domain of pain or pleasure, and to what extent they are possible as between pains, pleasures, or a pain and a pleasure, are questions of importance and difficulty. Such exclamations as that of Heine (Lazarus 37),

“Doch wer von Wonne trunken ist  
Der rechnet nicht nach eitel Stunden,  
Wo Seligkeit ist Ewigkeit.”

or Massimo d'Azeglio (“I miei Ricordi,” p. 37): “There are moments in life that would compensate for an eternity of torments”—are not to be regarded as pure rhetoric. Lehmann finds all more delicate estimates of the intensity of pleasures and pains impossible (“Hauptgesetze,” Section 332).

## 2. *Psychophysical:*

§ 21. The propriety of postulating in the case of pain and pleasure a correlation with phenomena of body like that generally assumed at present for presentation, is open to question from the standpoint of those who recognize a fundamental distinction between these two forms of mental fact. Professor Lipps denies “that feelings of pleasure and pain spring immediately from relations and respects of the nervous stimuli to bodily well-being and ill-being,” although he does not deny “that such relations and respects exist and run parallel to the corresponding psychic fact.” (“Grundthat-sachen des Seelenlebens,” 1883, p. 199.) The opinion here referred to, according to which the pleasure of any soul is the sign of some event in the body it inhabits which is favorable to the life of that body, and pain the sign of bodily detriment, is a very general belief, both popular and scientific. In the presence of human suffering the impression is instinctive that “something ought to be done;” we conceive that something is happening in the bodily economy that threatens its integrity. The instinctive impression in regard to pleasures is, on the other hand, that they “do one good,” in the sense of contributing to bodily well-being. Professor Bain writes regarding the bodily accompaniments of pain and pleasure: “A very considerable number of the facts may be brought under the following principle, namely, that states of Pleasure are connected with an increase and states of Pain with an abatement of some or all of the vital functions.” (“Senses and Intellect,” division on Movement, Sense and Instinct, Chap. IV. Section 18.) Lotze extends the application of the ideas of hindrance and furtherance beyond the

bodily life : while the "agreeable in sensation" is that which is adapted to the capacities of the sensitive mechanism, the "pleasant in idea" is that which is adapted to the functional conditions of the psychic mechanism; and æsthetic approval or disapproval is conditioned upon a furtherance or hindrance not personal, but of the universal spirit within us. ("Geschichte der Æsthetik in Deutschland," p. 262. "Grundzüge der Psychologie," Sections 47-49; cf. "Microcosmus," Book II. Chap. V. Similar principles are assumed by Lehmann, "Hauptgesetze," Section 202.) Yet these formulæ are the unequivocal expression of only very general ideas, however important. By Professor Bain's words, pain and pleasure are connected with the degree of certain forms of bodily functioning called vital, a certain intensity being perhaps assumed for each, above which pleasure and below which pain is the result to the accompanying consciousness; or, if no such dividing degree is posited, it is the intensification of function that is connected with pleasure, and its weakening with pain. Lotze is, perhaps, to be understood as connecting pain and pleasure with any functions of any structure, psychic or bodily (when correlated at all with mind), which fulfill the qualitative condition of adaptation to the powers of the structure. The criterion of adaptation is not stated; perhaps that of the longevity or vigor of the organism may have been in Lotze's mind; or it may be that he assumed no independent criterion, the doctrine he intended to express being that for every sentient being there exists a certain normal life history (physical, perhaps, as well as psychological), the perfect or mutilated realization of which is respectively pleasure and pain to it.

§ 22. It is frequently sought to express the bodily conditions of pain and pleasure in quantitative terms, either in connection with a theory of aid and hindrance to life, or independently of such a hypothesis. Professor Bain suggests that some principle of stimulation connecting pleasure with a consumption of nervous force which, though considerable, is not in excess of nutrition, may eventually be found completely to account for the facts. ("Senses and Intellect," *ibid.* Section 22.) Lotze proposes a similar theory, in which pain is conceived as the accompaniment of a consumption of nerve force in excess of the ordinary reparative powers. ("Medizinische Psychologie," Section 23.) These two principles are included in the theory of Lehmann ("Hauptgesetze," Section 208), who regards his hypothesis as, in the main, the same as that proposed by Grant Allen. ("Physiological Æsthetics," 1877, Chaps. II. and III.; criticised by E. Gurney, "Power of Sound," Appendix C.) Another hypothesis, stating the bodily



conditions of pain and pleasure in terms of energy received and given out by the organ concerned, has recently been proposed by Mr. H. R. Marshall, "Pleasure is produced by the use of stored force in the organ determining the content; and Pain is determined by the reception of a stimulus to which the organ is incapable of reacting completely." (*Mind*, Nos. 63 and 64, July and October, 1891. The theory is discussed in Professor Bain's article on "Pleasure and Pain," *Mind*, N. S. No. 2, April, 1892. Criticisms of other psychophysical hypotheses on this subject are contained in Mr. Marshall's article, and in those of Cesca: "Die Lehre von der Nature der Gefühle," *Vierteljahrsschrift für Wissenschaftliche Philosophie*, X. 2, 1886, and of Külpe, "Zur theorie der Sinnlichen Gefühle," in the same periodical, XI. 4, and XII. 1, 1887-88.)

§ 23. Fechner inclines to the opinion that only quantitative relations of the psychic can rightly be made to depend on quantitative relations of the correlated physical process (a like remark is made by Volkmann, "Psych.," Section 35, Note), and that pain and pleasure, as qualitative determinations, are to be conceived as depending on a form or form-relation of this process. He proposes, as a possible view, a principle of psychophysic stability. A condition of movement being stable "which involves the conditions of its own return," he suggests that "the actual relation subsisting in the realm of consciousness between effort, pleasure and pain, might be of such a kind that, beyond a certain degree of approximation to the stable condition, pleasure should be the result and, beyond a certain degree of withdrawal from the stable condition, pain should be the result, while between the two there should exist a condition of indifference of a certain breadth." ("Vorschule," XLIII. "Einige Ideen zur Schöpfungs und Entwicklungsgeschichte der Organismen," 1873, XI. Zusatz.)

### 3. *Philosophical:*

§ 24. Pleasure and value. That pleasure is one of the forms of value, is generally assumed: ("Nothing affirms itself to be valuable so unconditionally and so immediately as pleasure." Lotze: "Grundzüge der Ästhetik," Section 13); that it is the only form, is not an uncommon doctrine. The contention of Pessimism, as that term is commonly understood, is that since pain over-balances pleasure in experience, life is of no value (E. Von Hartmann: *Philosophische Monatshefte*, Vol. 19, 1883, "In what sense was Kant a pessimist?" p. 464; "i. e., whether he assumed a negative balance of pleasure in the totality of all existence . . ."). The literal implication

of this proposition, that pleasure is of no value unless it exist in greater amount than pain, is doubtless not the sense intended. This may, perhaps, be formulated in (1) a statement about the relation of pain and pleasure to volition, viz., sentient beings make no choices which they think are to lead to greater amounts of pain than of pleasure; and (2) a definition of value as that which is willed. Real life, according to this opinion, would never be chosen; the content of volition is always an impossible ideal of life. (Second Part of K. Henry IV. Act 3, Scene 1.) Independently of the question as to the commensurability of pain and pleasure, the truth of both statements in the analysis just given is to be disputed. In the doctrine of Utilitarianism, pleasure is again assumed as the only value ("Pleasure and freedom from Pain are the only things desirable as ends," J. S. Mill: "Utilitarianism," Chap. II.); righteousness, it is true, has the appearance of intrinsic worth, yet analysis shows it to be a function of pleasure (virtue is a good originally indifferent: "There was no original desire of it, or motive to it, save its conduciveness to Pleasure and especially to protection from Pain," *ibid.* Chap. IV.). By the aid of the principle, lately brought into question, of the inheritance of acquired characters, Darwin and Mr. Spencer have sought to show how an illusion in regard to the intrinsic value of virtue might have arisen. The sense of obligation is a precipitate of pains and pleasures from waters of oblivion. (Darwin: "Descent of Man," Chap. IV.)

§ 25. Defining the valuable as that which ought to exist, the fundamental doctrine of the threefold nature of mind heretofore posited, suggests in opposition to these tendencies of opinion that its determination as pleasure is only one of three forms which value may assume; that righteousness is the determination of value in the volitional aspect of the soul, and knowledge value in presentation. Intrinsic worth is as commonly denied to knowledge as to virtue. The spirit that cannot conceive of it as an end in itself, is illustrated in the argument with which Omar justified the burning of the Alexandrian library. The query of the Turkish *cadi*, quoted from Layard by Professor James ("Psychology," II. 641), "Will much knowledge create thee a double belly, or wilt thou enter Paradise with thine eyes?" implies that knowledge has value only as a means of pleasure or a help to virtue. "So that knowledge increases on us, if that be a good," remarks a personage in Wm. Morris's *Utopia* ("News from Nowhere," p. 46). (On the general doctrine of value, cf. Professor Royce's "Spirit of Modern Philosophy," 1892, Lect. XII., "The world of description and the world of appreciation.")

## II.—PAIN AND PLEASURE IN PRESENTATION.

### 1. *Normal Consciousness:*

#### (1) Sensational:

§ 26. (a). Physical pain. A working definition might be—markedly disagreeable sensation localized in the body. (Cf. Kroner: “Gemeingefühl und Sinnliches Gefühl,” *Vierteljahrsschrift für Wissenschaftliche Philosophie*, XI. 2, 1887, and “Das Körperliche Gefühl,” 1887, p. 167, where pain is defined as the feeling-tone of the skin and muscle sense.) This localization may be general or special, vague or precise. Pains localized throughout the whole body, or one cannot say where, in it, are called by Beaunis ( “Sensations Internes,” 1889), *malaises* or uneasinesses, *e. g.*, the feeling of languor (inability), exhaustion (used up ability), restlessness (insomnia or waking “nervousness”) or feverishness. In vertigo and præcordial oppression there is an indistinct special localization of the pain. Physical pain located definitely may have the tinge of a special bodily sense (painful touches, temperatures), and often assumes the form in time or space of mechanical interferences with the bodily economy (cutting, tearing, darting, etc., pains).

§ 27. On the question as to the physiological basis of physical pain there is much difference of opinion. (Kroner: *Körp. Gefühl*, Chap. XXV.) (a). Theory of special nerves and a special centre for pain. Richet ( “*Récherches sur la Sensibilité*,” Chap. V.) assumes a centre for pain, and Brücke several ( “*Physiologie*,” 1884, p. 266). The discovery of certain points on the skin, insensitive and others hypersensitive to certain painful forms of stimulation (researches of Blix, Goldscheider and Donaldson, described by the latter in *Mind*, for July and October, 1885), has given support to the hypothesis of special nerves of pain. (Lehmann contra; “*Hauptgesetze*,” Section 48.) The facts of analgesia (loss of sensibility to pain, with preservation of other sensibility) point the same way (yet the proof is not positive, according to Wundt, who offers another explanation, “*Phys. Psych.*” Chap. IV. Section 3; cf. Lehmann: “*Hauptgesetze*,” Section 58f.). This condition may be produced by drugs (*e. g.*, cocaine), or by partial section of the spinal cord (Schiff’s experiment), or by disease, *e. g.*, progressive muscular atrophy. Another item of evidence for special avenues of pain-conduction is the fact that in a painful contact, the pain is not felt with, but after the sensations of touch involved (according to Lehmann, Section 52f., because it is not the pain of that touch, but of certain massive sensation following the touch). Vulpian finds the hypothesis of special nerves of pain unten-

able (Deschambe's Dict. des Sciences Médicales Art. Phys. de la Moelle Epinière, p. 420; cf. Mantegazza: "Fisiologia del Dolore," 1880, Chap. X.); and the evidence of their existence is at least insufficient according to Beaunis ("Sensations Internes," p. 210f.; cf. Külpe: "Zur theorie der Sinnlichen Gefühle," *Vierteljahrsschrift für Wiss. Phil.* XI. 4, 1887, Chap. II. Section 2). Further, the close relation between pain and pleasure would seem to make it necessary to assume in addition to pain nerves a system of nerves for pleasure. (β). Theory that the physiological correlate of physical pain is intensity of the nervous irritation. (Richet: "L'Homme et l'Intelligence," I.; Wundt: "Phys. Psych." Chap. IX. Section 1 ad finem postulates also irradiation.) The existence of faint pains (*e. g.*, neuralgias, qualmishness) seems to make it necessary to posit instead of simple intensity some factor involved in intense irritation, but which may occur without it; *e. g.*, (perhaps widespread) interference with cortical functioning: Meynert ("Psychiatrie," 1884, p. 176) speaks of pain as a *Hemmungs-gefühl*, basing it on inhibitions not only of nervous irradiation from the painful stimulus, but of other performances of the cortex. The facts of the separation of pain and other sensation in analgesia and anæsthesia may in good part be explained by the supposition (γ) that extensity of irritation is essential to its production. (Cf. E. H. Weber in Wagner's H. w. b. der Physiologie, and Groninger: "Ueber den Shock," 1885.)

§ 28. The physiological effect of pain is in general a depression of the functions. Mantegazza (Fis. del Dolore) found a diminished pulse rate, temperature, nutrition and secretion (excepting tears and sweat). Darwin's discussion of the manifestations of pain is given in his "Expression of the Emotions," Chap. VI. On a certain pleasure in tears cf. the remark of Leopardi, "Epistolario," I. p. 292, "Could not one come from America only to enjoy the pleasure of tears for the space of two minutes?" Lehmann's experiments upon the manifestation of feeling ("Hauptgesetze," Section 95f.) have, in part, a reference to pain.

§ 29. (b). Bodily cravings. These are forms of appetency in which the object is sensation localized bodily. When the character of appetency (which may be one of the ultimate forms of presentation) is present, a certain more or less disagreeable state of consciousness exists, which can normally be put an end to with comparative permanence and completeness only when a certain other supervenes. The former experience is then called a craving for the latter; the latter the satisfaction of the first. Whatever fact of the pain and pleasure genus may be implicated with the satisfaction

in independent occurrence, in sequence upon a craving for it, it tends to be a pleasure. Cravings are connected with many bodily functions; *e. g.*, to breathe (feeling of suffocation); to move the muscles (for exercise; morbid forms are tics and chorea); to eat (hunger); to drink (thirst); to copulate (desire); to gape, sneeze, cough, chew, swallow, defecate, urinate, vomit (nausea?), wink, rest, sleep (drowsiness). A discussion of some of the more important is given by Beaunis ("Sens. Internes," Chap. II. Besoins). It is an interesting question, according to him, whether the activity of unstriated (organic) muscles may not become an object of craving, *e. g.*, in hunger. (Reference to Sir James Paget's "Clinical Lectures on Surgery:" chapter on "Stammering with other organs than those of speech.") The theory of Beaunis, that craving for muscular activity is due to a high degree of tension in the motor centres, would seem to correlate a nervous state and not a nervous activity with consciousness.

§ 30. With the craving of sex, the special pleasurable sensation which constitutes gratification is complicated; although the craving is no exception to the rule according to which appetency is in the direction of pain. Lust, which in earlier usage meant pleasure in general, has, in later English, come to signify the venereal desire principally. Comparable with sex are the two cravings involved in sneezing and itching: the satisfactions of all three are progressively intensifying and more or less abruptly closing courses of sensation, the quality of which does not seem altogether different. Sneezing and sex each leads up to a motor discharge; the satisfaction quality in each is complicated with the craving: they are further complicated together in experience, and sex, at least, with tickling, if not itching. All three cravings have their disagreeable side: this shows itself in massive form in the familiar experience of being balked of a sneeze which has gathered good headway. Snuff-taking may be conceived as an exploitation of the pleasure of the sneeze-craving, as lewd dances (*e. g.*, in the Orient) are of that of the sex-craving. The experience of satisfying an itching may (*e. g.*, in the scratching of an eczema) attain the volume and intensity of coitus. These similarities suggest a similarity of physical basis for the three forms of craving. The writer offers the suggestion that the satisfactions in all these cases are the result of the massage of muscles of organic life (unstriated muscles): a molecular form of the same experience we have in a motor way when voluntary (striated) muscles are stretched actively or by massage. The cravings might, then, be viewed as results of fatigues of unstriated muscles. The extraordinarily widespread connections of the sex-craving in the psychic

life give rise to the amorous passion. (On the part taken by imagination in the experience of being tickled, cf. Kroner: "Körp. Gefühl," p. 163f.) The cravings spoken of as "for repose" and "for sleep" appear to be inaccurately named: they are rather cravings for certain sensational content, normally complicated with the experience of the abandonment of effort, and with the state of drowsiness.

§ 31. Assuming that appetency (blind=craving: intelligent=desire, expectation) is essentially disagreeable and its satisfaction essentially agreeable, the following hypothesis may be offered in explanation of the fact. The physiological basis of a state of appetency consists of an anterior stage of the process whose psychic correlate is the experience craved, performed with another psychophysis process than the posterior stage as its successor. The pain of appetency is thus explained as the pain of thwarted psychophysis functioning. A process at last carried through after repeated inceptions, is performed with exceptional intensity, and this livelier success of psychophysis functioning is the ground of the pleasure of satisfaction. According to this hypothesis appetency is not exclusively a motor phenomenon (as Mr. Spencer seems to imply, "Psychology," I. Section 213; cf. Dumas: "L'Association des Idées dans les Passions," *Revue Philosophique*, No. 185, 1891); but one whose physiological correlate may be any form whatever of psychophysis happening; nor is this correlate a "nascence" of the correlate of the object of desire (cf. Mr. Spencer), but the occurrence of a preceding portion of it before another form of excitement than the succeeding portion. (Cf. Prof. Sully on Desire: "Pessimism," 1877.)

§ 32. (c). Lower senses. Neither the psychological nor psychophysical study of the lower sensations is as yet far advanced. Whether the pain of the voluntary muscles known as fatigue is caused by mechanical stimulus, or chemically by products of decomposition in the blood, is yet undecided. (Hermann: "Handbuch der Physiologie," Vol. III. Funke: "Tastsinn und Gemeingefühle.") A connection between loss of muscular power and a gloomy view of life is posited by Féré. ("Pessimisme et Impuissance," *Revue Philosophique*, July, 1886.) The experiments of Prof. Haycraft on touch indicate that the disagreeableness of the sensation of roughness is due to its pulsating intensity. ("An experimental inquiry into the nature of the objective cause of sensation," *Brain*, July, 1885.) In smooth touches the sensation is constant. These latter may be vividly pleasurable. (The hand in mercury. Joy of the Marquesan lady over the touch of plush, described in R. L. Stevenson's letters from the South Seas.) Is, then, the sensation of contact

in itself complicated with strong pleasure, or is this effect in a measure associative ? A possible explanation of the strong pain often accompanying a light touch (*e. g.*, a fly walking over the face), might ascribe it to the fact that this form of irritation involves an intense state of suspense in the nervous tracts subserving the sensation of contact. The light touch awakens anticipations of contacts of ordinary volume and intensity, which left without satisfaction sum themselves to a painful height. (On the question of the irradiation of weak stimuli, cf. Funke in "Hermann's Handbuch.") In the cases of heat and cold the question has interest as to the extent in which the pain and pleasure involved are complicated with the sensations themselves, or are the result of the effect on the system of the stimuli concerned, or are matter of association. Of the physiological conditions of the various tastes of substances, we are as yet entirely ignorant. (Cf. Vintschgau: "Hermann's Handbuch," Vol. III.) The question as to how many there are is not settled. They appear to exhibit the working of contrast, and a certain rivalry when simultaneous. The study of sensation of smell is no further advanced. Yet in sweet and bitter we have two representatives of the agreeable and disagreeable pronounced enough to give their names (in many languages) to many other forms of pain and pleasure ; and in smell the agreeable and disagreeable is no less marked. The arts of the kitchen and bar-room have reached a high degree of complexity, and offer rich material, as yet hardly touched, for the study of refinements and harmonies of flavors and odors: (Cf. Brillat Savarin: "Physiologie du Gout," 1825. The existence of a scale of odors is assumed by Dr. S. Piesse in his "Art of Perfumery," 1880); *e. g.*, what is the part played by association, and what is intrinsic effect in the satisfactions and repulsions of the gourmand and gourmet: what is the basis of the habitude of serving potatoes with fish: how does cheese enhance the taste of wine: are these harmonies a positive addition to the charm of the components, or an absence only of interference between them ?

§ 33. (d). Hearing. Of the two kinds of sensations of hearing, noise is in general not intrinsically pleasant, while tone is markedly agreeable in itself. This difference is naturally referred to the fact that the stimulus in the case of tone is regularly periodic vibration of the air. (Cf. Leibnitz: the pleasurable of tone proceeds from the "unsichtbare Ordnung" of the air vibration. Op. Phil. Ed. Erdmann, LXXVIII. Wundt, "Phys. Psych." I. Chap. VII. Section 4, finds it possible to assert "that the sensation of tone depends upon a regularly periodic course of excitement in the fibres of the auditory nerve.") The combination of two tones of differ-

ent pitch, either simultaneous or successive, is in almost all cases disagreeable, the exceptions being in general cases where the combination has positive charm. In these combinations, called consonant, the vibration ratios of the component tones can be expressed by the use of only the first few integers. (This remarkable connection between consonance and the first few integers formed the basis of the Greek conception of the harmony of the spheres. Ancient Chinese speculation upon it quoted by Père Amiot: "Memories concernant l'histoire, etc., etc., des Chinois," Vol. VI. Paris, 1780.)

§ 34. Euler suggested that the perception of order (in the combination of series of impulses) is the basis of the charm of consonant intervals (vibration ratios). ("Tentamen novæ theoriæ Musicæ," 1739.) A theory applying a like principle to a hypothetical physiological process concerned in consonance, is that of Preyer ("Akustische Untersuchungen," 1879, III., "Zur Theorie der Consonanz"), according to whom the order is perceived in the proportions of the segments marked out on the basilar membrane of the inner ear by the fibres concerned in hearing an interval. A view which bases the pleasure of consonance not on any grasp by the mind of proportions exhibited in the physiological event concerned in the perception of interval, but on a physiological result of these proportions (in this case proportions of duration), is taken by Prof. Lipps, according to whom auditory periodicities of simple ratio help, of complicated ratio hinder one another ("Psychologische Studien," 1885, II. "Das Wesen der Musitalischen Harmonie und Disharmonie." Cf the suggestion of Lotze: "Medicinische Psychologie," Section 22).

§ 35. In the theory of Helmholtz the disagreeableness of dissonant intervals is ascribed to the presence in them of rapid pulsations of sound (called beats), while the agreeableness of consonant intervals is left to be accounted for by the intrinsic charm of the component tones. ("Die Lehre von den Tonempfindungen," IV. 2d Edition, 10th and 11th Abschnitte, p. 320 and 335.) The pain of rapid beats is, according to Helmholtz, an instance of the general principle that sensations of quickly pulsating intensity are disagreeable. Of this fact his explanation is that "there is produced thereby a much more intense and more unpleasant excitement of the organ than by a tone that persists equably." ("Tonempfindung," 8th Abschnitt, p. 283.) E. Gurney finds this explanation unsatisfactory, and writes: "We seem thus driven to assume the existence of some other kind of nervous disturbance, connected specially with interruptions supervening on a mode of motion which has been sufficiently established to



become, so to speak, familiar." ("Power of Sound," p. 557. Cf. v. Hensen "Hermann's Handbuch," Vol. III. Or it may be claimed that irritation of a pulsating intensity is an exceptional form of sensory process, running counter to the habits of the sensorium.) The conclusions of Helmholtz on dissonance and consonance have since been called in question. A. von Oettingen presented two arguments against the theory of beats: (1) It does not account for the unchanged harmonic character of an interval in notes of different quality; (2) It does not account for the positive charm of harmony. ("Harmonie System in dualer Entwicklung," Leipzig, 1866, p. 30.) Preyer notes (3) that the theory of beats does not account for consonance and dissonance in successive notes, except through the aid of a complex hypothesis as to the part played by memory in judgments of tone. ("Akustische Untersuchungen," 1879, p. 60. E. Mach, "Beiträge zur analyse der Empfindungen," 1886, p. 119, recognizes the force of these criticisms. C. Stumpf writes: "The theory must, indeed, according to my conviction, be given up." "Vierteljahrsschrift für Musikwissenschaft," 1885, p. 345.)

§ 36. In explanation of the phenomena of harmony, v. Oettingen suggested two principles, one of which has found much acceptance since; viz., the reason why the intervals whose ratios are expressible by the first few integers are pleasant, is that it is these intervals that are exemplified between the partial tones of the standard musical note. The question suggested by this hypothesis: viz., why is this note the standard? has various possible answers: (1) Perhaps because among all possible notes this alone is free of beats (between partials or difference tones): (2) Perhaps because no one form of note is so common: (3) Perhaps because this is the note of the human voice. (This latter is the suggestion of O. Hostinsky. "Die Lehre von den Musikalischen Klängen," 1879, p. 55. "The musical sense has its foundation in an adaptation of the organ of hearing to the vocal organs.")

§ 37. (e). Sight. (a). Color. Notwithstanding the study that has been given questions regarding the pain and pleasure phenomena of the sense of sight, they are still in large measure without well defined and well established solutions. Sensations from light waves are in general pleasant, and it is natural to assign as the cause of this fact the uniformity of the physical process in which they originate. The inferior charm of the sensation of green has been attributed to the unusual intensity with which the light waves concerned in its production attack the visual mechanism: (Professor O. N. Rood: "Student's Text-book of Color," 1890, p. 295.) The same fact has been explained on evolu-

tionary principles: red and yellow are comparatively rare in nature, and are, moreover, the colors of fruits; hence the eye is not only fresh to, but strengthened for their percept- on: (Grant Allen: "The Color Sense," 1879, Chap. X II.) Associations with colors; their emotional effect; warm and cold color: (Goethe: "Zur Farbenlehre." Didaktische Theil, sixth Abtheilung. Wundt: "Phys. Psych." I. Chap. X. Section 2. Fechner: "Vorschule," I. p. 100f.; also direct effects of color, II. 212f.) Effects of combination of color and of light and shade; enrichment and impoverishment of colors by contrast: (Chevreul: "Harmony and Contrast of Colors," 1839. Brücke and Helmholtz: "Principes Scientifiques des Beaux Arts," 1881, section on harmony of colors. A. Kirschmann: "Die Physiologische-ästhetische Bedeutung des Licht und Farben Contrastes." *Philosophische Studien*, 1891, p. 382f.) Contribution of intellectual elements: (Sully: "Harmony of Colors," *Mind*, XIV.) Theory of optical balance: this is not necessarily æsthetic balance; theories relating color to tone lack a sufficient basis of fact: (Rood: "Student's Text-book," Chap. XVII.) (On the general subject, cf. Helmholtz's "Physiologische Optik;" Brücke: "Physiologie der Farben," 1866; A. Lehmann: "Farvernes Elementare Æsthetik," 1884.)

§ 38. (β). Form. (Cf. Lipps: "Æsthetische Faktoren der Ramuanschauung," 1891.) The æsthetic superiority of curved outlines has been ascribed to feelings of the movements of the eye involved in following them; on the principle that unless executed with intenser degrees of effort such movements are agreeable. (Wundt: "Phys. Psych." Chap. XIV. Section 2. Horwicz: "Psych. Analysen," Vol. II. p. 146. G. Allen: "Phys. Æsthetics," VII. Section 7. Lotze contra; these feelings too insignificant. "Gesch. der Æsthetik in Deutschland," p. 310. On the principle of least energy in æsthetics, cf. Fechner: "Vorschule," XLIII., and H. Jäger: "Das Princip des Kleinsten Kraftmasses in der Æsthetik," *Vierteljahrsschrift für Wiss. Phil.* 1881. p. 415.) The agreeableness of curves may be explained also on evolutionary principles, and further by perception of relations of direction and its change, and by association: (Sully: "Pleasures of Visual Form," *Mind*, 1880, p. 180.) A figure is symmetrical when it can be divided into halves, of which one can be conceived as the reflection of the other in a mirror; the symmetry being called vertical (arch) or horizontal (landscape and its reflection in water) according to the position of the supposed mirror. Our pleasure in symmetry and preference of the vertical to the horizontal form has been explained (Mach: "Die Symmetrie," 1872) by the resemblance in the

former case only between the experiences of observing the two halves of the figure, due to the vertical symmetry of the organs of perception, the assumption being that in general repetition of such experience is pleasurable. Theory of the habituation of the eye to vertical symmetry through observation of animals and plants: (Grant Allen: "Origin of Sense of Symmetry," *Mind*, XV., and "Phys. Æsthetics," VII. Section 8; also Professor Sully in article just cited.)

§ 39. (*γ*). Proportion. Preference in proportion is sometimes explained on a principle of the easy grasp of ratio (*e. g.*, Wundt: "Phys. Psych." Chap. XIV. Section 2). Zeising (in "Neue Lehre von den Proportionen des menschlichen Körpers," 1854, and other works) claimed that the Golden Section is the normal æsthetic proportion, and sought illustrations of it in the human body and in architecture. The line *A C* is divided in the Golden Section by the point *B*, when  $AB : BC :: BC : AC$ . Fechner finds Zeising's principle a real discovery in æsthetics, though not of the importance attributed to it by its author. ("Vorschule," I. p. 184f.; cf. Pfeifer: "Der goldene Schnitt," 1885.) The elements of the proportion being incommensurable the theory of an easy grasp of ratio does not seem to apply; but since it involves two applications of the same ratio, the explanation above quoted for symmetry (a repetition of visual experience) may be conceived to account for the charm of the Golden Section also.

## 2. *Ideal*:

§ 40. A principle according to which the success of psychic functioning is a cause of pleasure and its hindrance a cause of pain ("psychic euphoria" and its opposite, Meynert: "Psychiatrie," I. p. 180), serves to account for many of the more important phenomena of pain and pleasure in the sphere of idea. (In support of the Herbartian hypothesis basing feeling on the interaction of presentations, acute and detailed analyses of pain and pleasure phenomena in this field are given by Waitz: "Lehrbuch der Psychologie," 1849, III. Abschnitt. Nahlowsky: "Das Gefühlsleben," Sections 8-13, Section 16. Volkmann: "Psychologie," Section 117f.; cf. also on this subject, Horwicz: "Psychologische Analysen," II. Pt. II. p. 181f. Mr. Hodgson: "Theory of Practice," Section 19, Section 55. Professor James: "Sentiment of Rationality," *Mind*, 1879, p. 317, and "Psychology," Chaps. IX. and XXVIII. Fechner: "Vorschule," VII. Lehmann: "Hauptgesetze," Section 297f.) Familiar manifestations of the pain and pleasure genus in ideation are the strong discomfort of imperfect recollection

(when empty images of idea make us "ronger et despiter après leur queste," Montaigne: "Liv." III. Chap. V.) and the glow of pleasure accompanying its final success. An allied discomfort is that of being prevented from following up some thought from which avenues of suggestion seem to be open in the mind. The regret we often feel at being interrupted in a dream, the content of which may be indifferent, seems to be of this kind.

§ 41. The vague feeling of discomfort with which we apprehend an unsound argument may be interpreted as a reflection of thwarted habitudes of intellection whose cognitive content belongs to the penumbra of consciousness. (Cf. Meynert: "Psychiatrie," I. p. 274.) The state of mind called doubt is a form of intellectual event in which incompatible contents of thought alternate in consciousness and the development of consequences is in each case prevented: here again it may be assumed that the interruption of mental process therein involved is the source of the pain of the state. The experience called Belief (= sense of reality, Professor James: "Psychology," Chap. XXI.) is in the direction of pleasure, but it may be questioned whether the pleasure is intrinsic, whether it is not rather one of relief from the pains of doubt. (The pleasure of certitude, or belief conscious of itself, is spoken of by Newman: "Grammar of Assent," Chap. VI., as consisting in "the triumphant repose of the mind after a struggle.") The special pleasure of the confirmation of a belief may be given a provisional explanation by referring to the aid offered one process of thought by another. The pleasure in a recognition of the "identities struck by science" is, according to Professor Bain ("Emotions and Will," Chap. XII.), not only the positive charm of "the identification of likeness in remote objects and under deep disguises," but contains the negative element of "the lightening of an intellectual burden."

§ 42. The state of bewilderment, inability to comprehend what is presented to the mind, has a disagreeable character which may vary from simple annoyance (cf. Jean Paul's description of the vexation caused a writer by uncomprehended domestic noises, "Siebenkäs," Chap. V.) up to a discomfort of an overwhelming kind. Bewilderment as a state of overfulness of experience is sometimes contrasted with tedium, or ennui, as a state of mental emptiness. Yet the pain of tedium is unquestionably not one of intellectual default. Animals, doubtless, feel little ennui (one comfort of domestic pets is their capacity not to be bored), nor do men when their minds are at their emptiest, *e. g.*, in going to sleep. (Leopardi, "Pensieri," LXVII. and LXVIII.: Ennui is

felt only by those of some intellectual power; it is "little known to men of no consequence and least of all or not at all to animals." Cf. Drobisch: "Emp. Psychologie," 1842, Section 61. Professor Sully: "Pessimism," 1877, p. 235. Sir W. Hamilton: "Metaphysics," Section XLIV.) In tedium the mind is occupied, it may be claimed, with processes of idea that are balked in their natural progress, contents whose germination is hindered, or whose germinal power is insufficient, and which yet return again and again to consciousness. The discomfort of the state is not one, according to this, of a lack of ideation, but a lack of the fruition of idea. The mind is employed in ennui, but unsuccessfully.

§ 43. In one of their principal functions *Games* and *Sports* are an apparatus for the awakening of keen anticipation in order to the pleasure of its satisfaction: *e. g.*, events of little or no intrinsic interest become victories or tend toward an eventual victory (points in a game); again the rules or customs of the game or sport provide that the result shall be doubtful despite the best efforts of the participants (shooting a quail on the ground would be "unsportsmanlike"). Further, under the tension of suspense created in sports and games, there is a heightened bodily and mental functioning which is pleasurable in itself, often still further intensified by the sense of danger: and to this pleasure is to be added that of the facilitated play of the mental powers (sense of freedom) consequent upon the final satisfaction of an awakened anticipation. The interest of a game which is played for money, or of a sport where bets are made upon the result, being in general much greater than the sum of the pleasures to be received from the recreation in itself, and from the gain of money in itself, the charm of gambling affords an illustration of Fechner's principle of *Æsthetic Aid* ("Vorschule," V.). An indirect pleasure-yield of sports and games is due to the fact that they are more or less complete mental (and often physical) alternatives, taking us into a world of their own, and bringing us back refreshed to the real one: (Cf. Lazarus: "Die Reize des Spiels," 1883.)

§ 44. Taking a suggestion from Fechner's analysis of witty comparisons, plays upon words, etc. ("Vorschule," XVII.) *Riddles* may be conceived as an exploitation of the pleasure of the unification (by the solution) of a manifold (presented in the puzzling data). We are given complexes of presentation which do not, at first sight, offer any channels of idea enabling us to pass from the contemplation of one already prepared for what another is to offer us; there being, nevertheless, such a mediating idea called the answer of the riddle.

When this is found the passage from one element of the riddle to another affords a pleasure of expectation satisfied, intensified though the excitement of the previous (and perhaps still threatening) disappointments. (On unity in multiplicity as an æsthetic principle, cf. Fechner, "Vorschule," VI.)

## 2. *Special Conditions.* (1). Morbid.

§ 45. (a). Melancholia and mania are two types of mentally diseased condition, distinguished respectively by the misery and happiness of the subject. According to Krafft-Ebing ("Psychiatrie," II.) the "fundamental phenomena in melancholiac insanity are the painful mood of depression and a general difficulty which may become inhibition of psychic movements. . . ." "The facts compel us to regard the mental pain and inhibition as coördinate phenomena . . ." On the other hand mania is "a change of the self-consciousness in the direction of a predominately pleasurable mood of feeling and an abnormally facilitated flow of psychic activities, amounting sometimes to entire uncontrollability of the psycho-motor side of the mental life." These two characteristics are likewise to be considered as coördinate. The assumption involved in this theory of melancholy and mania is the general principle according to which the hinderment of mental function is painful and its furtherment pleasurable to the subject.

§ 46. The psychic phenomena of alcoholic intoxication are regarded as presenting a close analogy to those of insanity. (Griesinger: "Mental Pathology and Therapeutics," Eng. tr. 1867, Section 144, p. 310. Krafft-Ebing, "Psychiatrie," I., among "Analogien des Irrseins," finds the most exact to be intoxication by alcohol. Maudsley, "Pathology of Mind," 1880, p. 194, compares the first stage of happiness with mania and the following maudlin condition with melancholy; cf. the earlier decrease and the later increase of reaction-times under the influence of alcohol observed by Kraepelin: *Philosophische Studien*, I. 1883, p. 573, "Ueber die Einwirkung einiger medicamentöser Stoffe auf die Dauer einfacher psychischer Vorgänge.")

§ 47. (b). Impulsive insanity is a form of morbid state, in which both the pain of craving (or desire) and the pleasure of satisfaction reach an exceptional intensity. (Pyromania, kleptomania, homicidal mania, etc., are varieties.) The appetency seems in these conditions to fill well nigh the whole consciousness. Cases of the kind are adduced by Lotze as evidence of the psychological principle that "many even very complicated actions are carried out without definite volition." (Art. "Instinct," Wagner's *Handwörterbuch*.)

§ 48. (c). *Insanity and genius.* It has been debated of late whether the type of mind recognized as genius is or is not in essential characteristics a morbid type, whether mental operations betraying what is known as inspiration are to be called unhealthy or not. The affirmative is maintained by Lombroso (*"L'uomo di genio,"* 5th Edn. 1888), and in a modified form by Radestock (*"Genie and Wahnsinn,"* 1884). Hagen remarks that the deviations from the normal observable in the insane are monotonous: they resemble one another more than do persons of sound mind: (*"Ueber die Verwandtschaft des Genies mit dem Irrsein," Allg. Zeitschrift für Psychiatrie,* 1877. A remarkable case of artistic inspiration in mental disease has been described by Dr. W. Noyes: *AM. JOUR. PSYCHOLOGY*, Vol. I. No. 3. Vol. II. No. 3.) The frequency of a blood relationship between genius and unhealthy mental types is a striking fact, yet the state of mind itself of inspiration appears to betray a divergence from the normal consciousness opposed in an important respect to that commonly exemplified in mental disease. For the genius is a psychic type in which self-consciousness is easily weakened or extinguished (*"... Genius is nothing but the most perfect objectivity . . ."* Schopenhauer: *"Welt als Wille,"* section 36), while in the insane it is in general abnormally intense and persistent. The characteristic condition of genius is *unself-consciousness*: that of insanity *over-self-consciousness*: the normal make of mind being intermediate. In Plato's *Phædrus*, Socrates distinguishes between "two kinds of mania, one arising from human diseases, the other from an inspired deviation from established customs." Brentano (*"Das Genie,"* 1892) argues against a difference in kind between genius and talent. Yet genius is surely not the "capacity for infinite labor," but the *incapacity not* to labor infinitely: a case where two negatives do not make the affirmative.

## (2) Onirotic conditions.

§ 49. Under this head are here grouped a number of mental conditions possessing in common some prominent characters of states of dreaming, viz., a certain scantiness of psychic functioning (commonly intensified) and a diminution of volitional power and of the consciousness of self. The mental results of either external stimuli or psychic event are in these conditions less abundant than they are in the rest of the psychic life: they are simplified psychoses. (*"L'hypnotisme, polarization étrange de l'âme, n'en est donc, comme le songe, qu'une simplification."* G. Tarde: *"Criminalité comparée,"* 1881, p. 141.) The fact of interest in these conditions for the

present inquiry is that of their unsymmetrical relation to pain and pleasure. It may be claimed that they include most of the maximal pleasures known to man, and that while maximal pains have a certain tendency to produce them, when formed they tend to exclude the pain: moreover that they are in general less apt to be predominantly painful than states of ordinary complication (called waking states). (In "The Scientific Basis of Delusions: a New Theory of Trance," 1877, Dr. G. M. Beard grouped under the latter term somnambulism—artificial and spontaneous—mesmerism, hypnotism, catalepsy, ecstasy and like conditions, proposing the hypothesis that trance, which differs essentially from sleep, is "a functional disease of the nervous system, in which the cerebral activity is concentrated in some limited region of the brain, with suspension of the activity of the rest of the brain and consequent loss of volition." He elsewhere remarks on the fact that "the insane are not easily entranced.")

§ 50. (a). Dreaming. Sleep itself, in strict acceptation, is subject matter for psychology only as the fact of the discontinuity of the individual consciousness in time. As phenomenon of mind the term denotes the conditions called reverie, drowsiness, dreaming. The dreams of ordinary sleep are perhaps in general neither agreeable nor disagreeable. In exceptional cases both characters occur, often under circumstances which lead to waking (erotic dreams, nightmare). The emotion of terror may be felt in a dream more intensely than it ever is in the waking states of an ordinary civilized life. In some persons these dreams of fear occur only when the dreamer lies upon his back. If this is generally the case an explanation is suggested, based on the (disputed) assumption of the inheritance of acquired characters, by the fact that in human and pre-human conflict, sensations in the back have been associated with the terrors of flight or of inability for defense. The pain of nightmare is complicated with an intense form of the pain of a thwarted nervous process, that involved in crying out.

§ 51. (b). Natural somnambulism. The characteristic of the state is excitement of the motor centres. Assuming that successful nervous functioning contributes pleasure to the correlated consciousness, this state should, in good measure, be agreeable, for in general there is a noticeable exactitude in the motor processes it involves. Somnambulists are apt to be sure-footed and sure-handed (cf. Mark Twain's anecdote of the Mississippi pilot who steered his boat through a difficult passage while asleep). In waking life this exactitude of movement is a pleasure: the surety of hand of a ball or tennis player, the surety of foot of a leaper is a source of



pleasure to him independent of the results of his activity. A state of agreeable reverie developed during prolonged and regular physical labor (mowing) is described by Tolstoi in Anna Karénina: "Les bien heureux moments d'oubli revenaient toujours plus frequents, et la faux semblait trainer à sa suite un corps plien de vie, et accomplir par enchantement sans le secours de la pensée le labeur le plus régulier. En revanche lorsqu'il fallait interrompre cette activité inconsciente, enlever une motte de terre, ou arracher un bouquet d'oseille sauvage, le retour à la réalité semblait pénible."

§ 52. (c). Hypnotism. Insensibility to certain painful stimuli applied to the skin is one of the regular accompaniments of hypnotism. On command, and even without it, perhaps through the restriction of the consciousness of the subject to matters concerned with the personality of the operator (*rappor*t), other pains, though naturally intense, are apparently unfelt (surgical operations). The nature of these phenomena is a question of interest. Are the presentations involved stripped of their painful character or do they fall out themselves; and is this lapse a case of unconsciousness or of want of notice? Does the hypnotic consciousness, further, behave in like manner in respect to pleasurable experience? *e. g.*, are there forms of pleasure to which the hypnotic is spontaneously unsusceptible; and can experiences be stripped of their character of pleasure on command? (Cf. the erogenic zones of Chambard; Binet and Féré: "Animal Magnetism," p. 152.) In the emotional sphere the hypnotic consciousness is called hyperexcitable: patients easily weep and laugh; moreover their emotions state have the inertia of all their mental operations: they tend to persist abnormally. (For a certain undisturbedness of bodily functioning in hypnotism an item of evidence is supplied in the simplicity of the muscle and pulse tracings obtainable during the cataleptic condition. *Journal of Nervous and Mental Disease*, Vol. X. 1883, p. 1. Note by Charcot and Richet.) States of concentrated thought have, as the name and the accompanying sensory (and often motor) quiescence shows, onirotic characters, although apparently not cases of volitional abeyance. Yet it may be questioned whether activity, effort of will, is not a foreign element in these conditions in the sense that in so far as it is excited they tend to disappear, and that for the most part they are a condition of passive waiting for the subject-matter to unfold itself before our mental vision. They seem like alternations of dreaming and waking to secure what we have dreamed. ("La pensée est le labeur de l'intelligence: la reverie en est la volupté." V. Hugo: "Les Misérables.")

§ 53. (d). Shock. A bodily state, the result of severe injury, presenting defined characters and accompanied by a psychic condition akin to hypnotism. A striking element in this is the diminished or extinguished sensibility to the pain of the lesion (*e. g.*, the wounded in battle or in a railway accident are often unaware of their injuries). The phenomenon has been explained as an extreme case of inattention. Groninger makes the supposition that this painlessness of grave injury is due to the fact the stimulus has eaten up so much of the potential energy of the nervous tracts it has attacked that what is left is insufficient to bring about a sensation of pain, this demanding a wide extensivity of nervous origin, the coöperation of much nervous matter ( "Über den Shock," 1885).

§ 54. (e). Narcosis. The bodily effect of narcotics is described as a more or less complete paralysis of some part of the nervous mechanism. On the principle of localization the psychic correlative of this phenomenon should be a more or less pronounced psychic simplification. The fundamental element in the ineffable pleasures of opium, according to De Quincey (and other witnesses), is the calm in which it immerses the consciousness: "Here were the hopes which blossom in the paths of life reconciled with the peace which is in the grave; motions of the intellect as unwearied as the heavens, yet for all anxieties a halcyon calm; a tranquillity that seemed no product of inertia, but as if resulting from mighty and equal antagonisms, infinite activities, infinite repose." ("Confessions of an English Opium Eater," p. 81.) On the principle claiming a pleasure to the inhabitant Psyche from the successful functioning of the body it inhabits, the delight of opium can be conceived according to this description to proceed from the relief of the hemispheres from the mass of little conflicts of function which are the customary results of the complexity of waking states; states of psychic simplification being freer from hindrances as the branches of a tree may interfere less when few than when many. In narcosis we seem to get the natural joy of the fullness of life, pure for the time being (*e. g.*, in onirotic conditions absurdities meet no contradictions; the voice of sagacity fails to shatter the dream world).

§ 55. (f). Emotion. The question has been debated in recent years whether emotions are to be regarded as solely compounds of other mental facts, or whether there are independent psychic elements involved in them. Mr. Hodgson holds the latter opinion: "The emotions in my theory became a new kind or mode of feeling depending upon the constitution and operation of nervous matter, and in this respect

are similar to sensations:" ("Theory of Practice," Vol. I. p. 108.) Prof. James takes the former view ("What is an Emotion?" *Mind*, XXXIV. 1884, and "Psychology," Chap. XXV.), holding that an emotion is the sensation of bodily changes brought about by its exciting cause. According to Lange ("Ueber Gemüthsbewegungen," 1885) these bodily changes are originally vaso-motor phenomena. Prof. James' view is criticised by E. Gurney (*Mind*, 1884; cf. E. Kroner, "Das Körperliche Gefühl," Chap. XI.). Lange is criticised by Lehmann ("Hauptgesetze," Section 83f.), who gives (Section 95f.) an account of his own experiments on the bodily accompaniments of emotion. He concludes vs. Prof. James and Lange, that the sensations from these are not the only constituents of emotion (Section 150), which normally involves an introductory pleasurable or painful presentation (Section 151), whose agreeableness or disagreeableness is its own and cannot be regarded as borrowed from accompanying bodily feeling (Section 164. Cf. Worcester in *The Monist*, Vol. 3, No. 3. The derivative nature of emotion maintained by E. Regalia, "Sul errore nel concetto di Emozioni," *Riv. di Fil. Scientifica*, Oct., 1890). On the bodily theory of the emotions their content in pleasure and pain is to be explained by a reference to the bodily disturbances their exciting cause awakens: and on any derivative theory by a reference to their component elements, sensational or ideal. They are discussed in the present connection in order to lay emphasis upon onirotic characters that are apt to be conspicuous in them. A state of emotion is one of more or less absorption or entrancement: emotions carry us away, put us beside ourselves, and while they may give pain as well as pleasure, it seems possible to claim for them the trend toward the latter that distinguishes states of psychic simplification in general. They might be described as less pronounced onirotic conditions, originating in an imaginative content generally markedly pleasurable or markedly painful. That one's views of any matter differ greatly under emotion, and most noticeably by default, from the impressions of a dispassionate contemplation, is a commonplace of psychological moralizing. The suggestion here offered is that emotion consists in this partial mental vision when the narrowing of the consciousness has taken place round an ideal content ("representational framework," Hodgson), generally markedly painful or pleasurable, with its appurtenances of sensation. The glow of the emotion would then be the result of a hyperæsthesia of the subject of these elements and these afterward accruing to the consciousness. The psychosis might in general include what are called bodily sensations, whose contribution in volume or in-

tensity of pain or pleasure would perhaps tend to blind us to that of other psychic elements : but their partial or complete absence (as in the case of many æsthetic or religious enthusiasms) would not destroy the emotional character of the state, *i. e.*, the character of an onirotic condition formed on ideal elements for the most part markedly agreeable or disagreeable. A conception like this would serve to account for the small revivability of emotional states (and hence for the backward psychology of the subject), for this is a character of dream-states too. (Of his desertion of Fred-e-rike, Goethe writes, "Those were painful days whose memory has not remained with me." "Wahrheit und Dichtung," Book XI. ad finem ; cf. Tourgénéieff, "Smoke.") The emotional states which best lend themselves to such an interpretation as this are the following :

§ 56. (a). Wonder, horror, etc. The expressions, "petrified" with fright or astonishment, and "frozen" with horror, suggest a cataleptic condition. (The original application of the Greek word *ἔκστασις*, our ecstasy, seems to have been to these states.) Surprising or horrible experiences seem to arrest the psychic machinery as it is arrested in hypnotism by the word of the operator, or through the fixation of shining objects. Conceiving that the onirotic condition tends towards pleasure and away from pain, the attractiveness to coarser natures of gladiatorial shows and even of scenes of torture (in Racine's "Les Plaideurs," Isabelle is invited by Dandin to witness an examination by torture) and of accidents, funerals, executions, representations of the horrible in art, even to the more civilized, may be explained by the power the vivid imagination of pain possesses to hypnotize the percipient even without any suggestion of personal danger. Animal cataplexy is conceived as allied to hypnotism ; yet it seems often to be a species of petrification by terror. (Cf. Preyer: "Die Kataplexie," 1878.) Fear may also cause sudden muscular relaxation : (cf. suggestions of sinking through the earth in shame : the word humility is derived from Latin *humus*, the ground.) Such expressions as "blind fury," "taub vor zorn," suggest hypnotic characters also in anger. (The anæsthesia therein is very evident according to Lange, although he doubts the value of such expressions as evidence : "Gemüthsbewegungen," 1887, p. 34.) The slave was put at the elbow of a Roman conqueror to break up now and again his emotion of pride by bringing him to self-consciousness. In pity "by means of the knowledge that I have of (another), *i. e.*, the presentation of him in my head, I identify myself with him . . . ." (Schopenhauer : "Grund-lage der Moral," Section 16.)

§ 57. ( $\beta$ ). Love. The proverb, "Love is blind," asserts a form of psychic simplification as a characteristic of amorous passion. What the form is, H. Beyle has sought to express by his metaphor of crystallization. ("Physiologie de l'Amour," published under the pseudonym "de Stendhal.") The idea of the loved one or of her return of one's affection is here a pleasurable nucleus of presentation (a naked branch lying in an abandoned working of a salt mine), to which and to allied ideas and impressions in so far as they are agreeable (the atmosphere of the mine in so far as laden with salt can deposit crystals thereof upon the branch), the more vivid consciousness of the lover is mainly restricted. "Ce que j'appelle crystallization, c'est l'opération de l'esprit qui tire de tout ce qui se présente la découverte que l'objet aimé a de nouvelles perfections;" there is further a second crystallization "produisant pour diamants des confirmations à cette idée : elle m'aime." The phenomena suggest those of "*rapport*" between operator and subject in hypnotism : but a *rapport* that is hedonic in origin and outcome, the consciousness of the lover being mainly held to pleasant sensation and suggestion. (Cf. Molière's description of his passion for Amande Béjart: "Toutes les choses du monde ont du rapport avec elle dans mon cœur; . . . Quand je la vois . . . je n'ai plus d'yeux pour ses défauts, il n'en reste seulement pour tout ce qu'elle a d'aimable;" and the scene in the "Bourgeoise gentilhomme": *Covielle*. Elle a les yeux petits. *Cleonte*. Cela est vrai. Elle a les yeux petits, mais les a pleins de feu, les plus brillants, les plus perçants du monde, les plus touchants qu'on puisse voir. Etc., etc.) The abeyance of self-consciousness in passionate love is the burden of a fable of Jelalluddin quoted in Fitzgerald's translation of Omar Khayyam. The sufficient condition for the production of such hedonic rapport seems to be the insistence of the attacks of pleasure from the given person. The summation of many charms may either gradually or suddenly set up a hedonic rapport with the charmer in the soul of the charmed. (On personal charm, cf. Prof. Sully: "Sensation and Intuition." Chapter on "The æsthetic aspects of character.") One of the most charming of traits is the habitude of unselfconsciousness, as that of selfconsciousness is one of the least pleasing. Hence a certain lack of personal charm in those accustomed to being "lionized" socially, and even generally in people of intellectual attainments. The charm of unselfconsciousness may be that of a "natural joyousness of temperament" (Prof. Sully: *ibid.*; "All the world loves a lover," Emerson), happiness being the mother mood of self-forgetfulness: (Mach: "Beiträge zur Analyse der Empfindun-

gen," p. 18); while the companionship of a reflective (and hence less joyous) nature tends to destroy one's own naïveté, and with it one's capacity for pleasure. ("L'habitude d'analyser toute chose m'a rendu irremediablement triste," Theophile Gautier.)

§ 58. (γ). Religion. The Spanish mystic, Santa Teresa, describes the intenser forms of meditation upon divine things as a "sleep of the powers," the senses being suspended, the will in abeyance, and the consciousness restricted to the contemplation of Deity alone. ("Castello Interior" and "Autobiography," quoted by Mantegazza; "Le Estase Umane," 1887, Chap. X., and by Ribot, "Psychologie de l'attention," 1889, p. 143f.) These states of religious absorption appear to have possessed the trend toward pleasure and away from pain here claimed for onirosis in general. Santa Teresa had terrible visions sometimes, but for the most part glorious ones, where beatitude was beyond all description. Again perceptions of brilliant light (the principal sensational source of the hypnotic condition: cf. infatuation of insects and birds with light) were prominent in her visions: "It is an overflowing splendor that gives unimaginable pleasure to the sight and does not weary it." Again her trances became more complete and more glorious as they were multiplied (as the perfection of hypnosis grows with the habituation of the subject): and the fact was a great mystery to her. Again the passivity of her state seems to have been an essential element of it, for activity broke it up. One apparition she had the greatest desire to make more clear, "but all my efforts served only to make the vision disappear more completely." (Cf. the fables of Cupid and Psyche, and of Lohengrin, where action is again a kill-joy.) The penances and hardships Santa Teresa inflicted upon herself as well as the self-tortures of all other religious enthusiasts and the constancy and even beatitude of martyrs may be taken as evidence of an onirotic insensibility to physical pain. According to Spitta ("Traumzustände der menschlichen Seele," 1882), ecstasies (*e. g.*, those of religious exaltation) are a disease of the emotional nature and not to be counted among dream-conditions which are healthy. Yet if by disease is here meant a state incompatible with an average duration and vigor of the bodily organism, an extraneous character is made the basis of a classification of mental conditions, to the neglect of intrinsic likenesses. Moreover the fact may be disputed.

§ 59. (δ). Beauty. The state of æsthetic contemplation is fundamentally a hypnotic condition (passivity: narrowed consciousness) according to Souriau ("La suggestion

dans l'art" 1893), who quotes to the same effect Bergson ("Essai sur les données immédiates de la conscience," 1889, p. 11), "Les procédés de l'art sont comme une forme atténuée, raffinée et spiritualisée en quelque sorte des procédés de l'hypnotisme." (Cf. note by Ola Hanson in Schmidkunz's "Psychologie der Suggestion," 1892.) In reading a play of Shakespeare, writes Gustave Flaubert ("Correspondance," I. p. 163), "On n'est plus homme, on est œil." (Cf. Schopenhauer: "Welt als Wille," Section 38: In the contemplation of beauty one is no longer "an individual, but pure will-less subject of knowledge.") Of artistic creation, Flaubert writes ("Correspondance," II. p. 359): "C'est une délicieuse chose que d'écrire, que de ne plus être *soi*, mais de circuler dans toute la création dont on parle. Aujourd'hui, par exemple, homme et femme tout ensemble, amant et maîtresse à la fois, je me suis promené à cheval dans une forêt par une après-midi d'automne sous des feuilles jaunes, et j'étais les chevaux, les feuilles, le vent, les paroles qu'on se disait et le soleil rouge qui faisait s'entrefermer leur paupières noyées d'amour." The happiness of the state is by Schopenhauer attributed to its calm (Section 38, "It is the painless condition that Epicurus extolled as the highest good, and the condition of the gods: for we are for the moment freed from the vile urgency of will, we celebrate the Sabbath of the work-house labor of volition, the wheel of Ixion stands still." Cf. Narcosis). Yet there is certainly involved, besides, a hyperæsthesia to the pleasurable content round which the dream-state has been formed. Conceiving in this way of æsthetic contemplation as onirotic in character and conceiving of its object as the form (consensus of relations between parts) of what is contemplated (cf. Kant: "Kritik of Judgment," Bernard's tr. p. 90: Herbart's "Werke," III. 381). Beauty might be described as a pleasurable content in the internal relations of an object which makes, or should make, their perception the nucleus of a purely pleasurable dream-state; *i. e.*, when the perception of the relations between the parts of any whole is unremittingly pleasant ("Rien ne me choque," Chopin), their contemplation ends in a dream-state over the object productive of no other than pleasant suggestion, this being the mood of enthusiasm over its beauty. The consciousness is narrowed down to the unselfconscious contemplation of the object in question and related agreeable presentation. The beautiful is so often the simple, we may claim, because so seldom can the relations between the parts of a complex object be kept even predominately agreeable. What is called an "artistic atmosphere" may be regarded as an environment where pleasure-giving experiences of this kind are frequent enough to be apt to sum themselves to a height

resulting in the æsthetic onirosis. According to this view of beauty, and that previously suggested in regard to emotion in general, the aim of art may be said to be both the excitement of emotion and the presentation of form: since the mood of æsthetic contemplation consists of the emotion *of* form. The notion that the mind in hedonic onirosis is closed to all but pleasant suggestion, serves to make easier of comprehension the process of artistic creation. How, amid the countless possibilities of association for the most part not pleasure-giving at all, should the artist's mind be able continually to move onward for happy thoughts? The answer would be that the enthusiasm of beauty shuts the soul up within a sphere where none other than fortunate events happen. (This hypothetical condition therefore differs from the state described by Lehmann, "Hauptgesetze," Section 345, as "Expansion of Feeling," wherein associations and impressions both pleasurable and painful reach the consciousness, but where those of opposite tone to the existing mood for the most part fail to affect it.) Conceiving of Ugliness (in accordance with a general tendency in modern German æsthetic opinion) not as the negation, but the pretence of beauty, it might be described as the mingling in the form of an object of conditions productive of, with conditions overpoweringly destructive of, a hedonic onirosis.

§ 60. The subject of beauty is apt to be approached rather from the philosophical than the psychological standpoint. In the "Vorschule" (II.), Fechner distinguishes three senses of the term beautiful: a widest sense, in which it means the intrinsically pleasing; a narrower sense, of æsthetics and art theory, in which it is applied to objects of the sense in so far as they immediately yield a higher than mere sense pleasure, either through the recognition of their internal relations or by association of ideas (and not alone the former, as Kant and Herbart would claim); and a narrowest sense, in which it means what ought to give us pleasure, the idea receiving an essential determination from the conception of the good. In this narrowest sense the idea differs according to this explanation from that of Lotze ("Grundzüge der Ästhetik"), in that the good itself is considered to be with the beautiful a function of pleasure; while to Lotze the idea of the beautiful is based upon that of the good. (On the psychology of beauty, cf. the recent discussions of Mr. H. R. Marshall: *Mind*, N. S. Nos. 3 and 4, "The field of æsthetics psychologically considered;" No. 5, "Hedonic æsthetics;" cf. also Groos: "Einleitung in die Ästhetik," 1892.)

§ 61. The perception of the Comic is closely connected in experience with the bodily movements known as laughter.



Hecker proposes a theory of the physiological basis of the perception of the ludicrous, according to which laughter is a consequence advantageous to the organism. Like the experience of being tickled, that of the appreciation of a joke has as a physiological accompaniment an intermittent pressure upon the brain through the intermittent contraction of the minute blood vessels therein, laughter equalizing this by causing their congestion. ("Physiologie und Psychologie des Lachens und des Komischen," 1873.) The conception of inferiority is sometimes thought to be the essential element in the ludicrous, but more commonly that of incongruity. The former analysis is that of Hobbes ("Human Nature," Chap. IX. Section 13): "I may therefore conclude that the passion of laughter is nothing else but *sudden glory* arising from some sudden *conception* of some eminency in ourselves, by *comparison* with the *inferiority* of others, or with our own formerly." Akin to this is the formula of Bain, who finds that "the occasion of the ludicrous is the degradation of some person or interest possessing dignity in circumstances that excite no other strong emotion." ("Emotions," Chap. XIV. Section 39.) The latter analysis (incongruity) is illustrated in the formula of Kant, who finds absurdity the basis of the comic ("Kritik of Judgment," Section 54, Bernard's tr.): "Laughter is an affection arising from the sudden transformation of a strained expectation into nothing:" moreover, the pleasure of the ludicrous is solely that of the accompanying laughter; "the lungs expel the air at rapidly succeeding intervals, and thus bring about a movement beneficial to health: which alone, and not what precedes it in the mind, is the proper cause of gratification in a thought that represents nothing." To Prof. James the emotion of the ludicrous is like other emotions, the feeling of its expression (*i. e.*, laughter): "If we imagine away every feeling of laughter and tendency to laugh from [our] consciousness of the ludicrousness of an object," would what remains be "anything more than the perception that the object belongs to the class 'funny?'" ("Psychology," Chap. XXV.) In Schopenhauer's theory ("Welt als Wille," I. Section 13), "Laughter never arises from anything else than the suddenly recognized incongruity between a conception and the real objects that in some respect or other have been thought through it, and it is itself simply the expression of this incongruity." This conquest of perception over thought delights us ("Welt als Wille," II. Chap. 8): for perception is the effortless medium of our pleasures, thought the laborious medium of our cares. ("Grau, theurer Freund, ist alle Theorie, und grün des Lebens fruchtbar Baum." Faust.) "It must therefore be delicious to us to see this hard, tireless, oppressive

taskmistress Reason for once proved insufficient." As the writer sees the matter, the perception of the ludicrous is not complete when the incongruity here described has been discovered, nor does the pleasure of the comic proceed from its recognition. The completed perception of the ludicrous involves a sequence of a satisfaction upon a disappointment, and the pleasure of it is the intrinsic pleasure of the one sharpened by the excitement of the other. When an object of perception is ludicrous to us, there ensues at a certain point in our contemplation of it some development of presentation which is incompatible with the existing content of our expectation, and something, moreover, which does not leave us simply bewildered—*i. e.*, does not simply make the object incomprehensible to us, empty our minds, or put us in a whirl of those reachings forth of the imagination which are involved in comprehension,—but which is of a nature to substitute a new mass of ideal activities for the old one proved insufficient, the new comprehension taking in not only old elements of the object of comprehension, but also the new and hitherto surprising one. The moment of this twist of the mental kaleidoscope is the moment of "seeing" the joke, and the glow of the ludicrous is our delight at the new order that springs out of the momentary confusion. (On the ludicrous, cf. Prof. C. C. Everett: "Poetry, Comedy and Duty," 1888, II., "The Philosophy of the Comic.") In the conception of the Tragic, the idea of human plans rendered impossible of realization is an important if not essential element. According to Prof. Everett (*ibid.* p. 134), tragedy involves the three elements, necessity, blindness and retribution. Perhaps the formula might be, if  $\alpha$ , then necessarily  $\beta$ , but if  $\beta$ , then I (an ill): the sequences involving the activity of persons but partially alive to the situation in which they are involved. Prof. Everett remarks upon the similarity of psychological outline between the comic and the tragic (p. 165f.), and finds a fundamental differentia to be that the comic is given in the relation itself of incongruity, while the tragic involves the elements entering into an incongruous relation, the causes that produce it and the effects resulting from it (p. 188). The special fascination of the tragic may be ascribed to the onirotic condition produced by its horror, with the accompanying hyperæsthesias among other things to the pleasure of the realization of recognized necessities. (The *κῆθορσις* of pity and terror, which Aristotle's description of tragedy asserts as its result to the spectator, is interpreted by Mr. Bosanquet, "Hist. of Æsthetics," p. 64, as "an alleviating discharge," the rendering being based upon a passage in the "Politics," Book VIII. Chap. VII., where a similar working of music is described as "a

kind of purgation and relief accompanied by pleasure.”)

§ 62. The FINE ARTS may be defined as those branches of human activity into whose aims the purpose to construct beautiful objects enters as an element. They may be classed as mixed (decorative) and pure (high), according as their products are or are not constructed with other ends in view than that of the embodiment of beauty. They may again be classed as dynamic arts (arts of movement) and static arts (arts of rest), according as their products do or do not involve change as an essential element. Among the latter the more conspicuous are picture, sculpture, architecture, ornament (of utensils of stone, earthenware, wood, metal, glass, etc.; of textile fabrics : arts of the gardener, of the jeweler, etc.): among the former, manners, dancing, drama, literature, music.

§ 63. *Picture* may be described as the beautiful representation of visible things by the application of color to a surface (including the use of black and white). The purpose of any imitative art may be said to be illusion, but not deception: the beholder is not to conceive himself in the presence of what is imitated, but to forget himself in the beauty presented to his contemplation. The value of verisimilitude in picture may in part be explained by assuming as a general principle that that alone to which we are accustomed gives us pleasure. Recondite habits derived from daily visual experience wait within us to be engraved deeper ; the subjective result of this process being enjoyment. There is no such response within us to unreal representation, whether simply arbitrary (unfamiliar) or conventional (overfamiliar); hence the greater masters of picture have first been great seers. Yet verisimilitude, while necessary, is insufficient in picture. Compare with the utterance of de Goncourt (Journal III. p. 127), “ Le supreme beau est la représentation de génie exacte de la nature,” that of Heine (in “ Gedanken und Einfälle ”): “ Daguerreotypy is a witness against the erroneous view that art is imitative of nature. Nature herself offers evidence how little she understands of art, how lamentable the outcome is when she tries her hand at art.” That the confusion of beauty and truth is an attempt to obliterate a real distinction is again the burden of the passionate line (Letzte Gedichte : “ Für die Mouche ”): “ Stets wird die Wahrheit hadern mit dem Schönen.” Evidence in support of the doctrine basing beauty on form (*i. e.*, relations), is given by the instinctive choice in discussions of picture of words (as yet without clear and generally received definitions in this application) derived from the terminology of music, *e. g.*, tone, pitch (perhaps place in a color scale), harmony (relation of color), chord (combination of relations of color), key (relation between com-

binations of relations of color.) (Cf. Prof. Van Dyke: "Art for Art's Sake," lectures on the technical beauties of painting, 1893.) A distinction may be made between the art of picture and the art of painting; the products of the former being the pictorial result, those of the latter the pictorial process. (Cf. Van Dyke: *ibid.*, Lect. VII., who writes of brush work, "If rightly used it is an embellishment of art, and in some cases it is art itself.") To the eye of a craftsman a product of picture may be the evidence of another work of art, invisible to those not of the craft, viz., the method which has brought it forth. Thus among "painters' painters" there may be those whose manner of painting is their real achievement: yet his pictures must be the achievements of a painter for the world. In this sense of an art of the process, any fine art must be conceded to have but limited importance.

§ 64. *Sculpture* may be described as the beautiful reproduction of the form of tangible things; the object of representation generally chosen being the human figure. As far as this material goes the art may be claimed to be an exotic in modern European civilization. Since the human form is an object we seldom see, there are no visual habitudes of its observation within us to be flattered by the modeler's art. Fechner remarks that the sense of the beauty of the human foot is entirely lost in modern Europe, what is called a pretty foot being in reality a particular form of shoe we have grown to admire. (With the Chinese it is worship.)

§ 65. *Architecture*. According to Lotze ("Geschichte der Ästhetik in Deutschland," p. 507), a work of architecture exists whenever many separate heavy masses are combined into a whole that maintains itself in equilibrium upon a supporting plane through the interaction of its parts. Architecture is to be regarded as a mixed art, since its products almost always subserve other purposes than those of æsthetic contemplation. An important psychological principle of architectural beauty is that according to which a building should in none of its parts awaken conceptions of structural necessity which are either contradicted or fail of satisfaction by other parts. Nevertheless forms admitting readily of interpretation as ornament may without detracting from its beauty be of a character to make structural suggestions about a building which it does not realize. Such devices are of the nature of artistic play: they betray the outlines of the comic; *i. e.*, a suggestion made by one element in a whole is contradicted by another element, the contradiction ceasing upon another patent interpretation of the whole. In the present case this latter is the interpretation of the given form as superfluous (ornament). The forms of Greek architecture

which can be interpreted as reminiscences of wood construction are perhaps to be regarded as essentially ornament: the style would not then be on their account defective. The same can be claimed for the delicate nonsense of classic form in earlier Renaissance architecture. But the ponderous Roman builders and those of the high Renaissance missed the point of their predecessors' humor, and made inharmonious earnest of the playful efflorescence of earlier and happier times. One good reason exists for conceiving of architecture as "petrified music" in the resemblance between the use of typical forms in architectural styles and thematic development in musical composition: *e. g.*, in Gothic the pinnacles of buttresses repeat the spire form, the pointed arch of the vaulting is repeated in the windows, etc., etc. Lotze finds the flying buttresses of Gothic by no means a happy thought; they give the idea of a scaffolding left standing: (Cf. de Stendhal: "Memories d'un Touriste.") The world yet waits to be impressed by the beauty of forms of iron construction in architecture. Is this simply because these admit of a greater freedom of line than the powers of design possessed by the present generation are able to cope with? or because they are in large measure determined by other (useful) considerations than those of beauty; or because architectural iron work is by nature a construction full of straight lines, of great complexity, must be given a color and is devoid of romance, *i. e.*, there is no history in it, and no suggestion of permanence?

§ 66. *Ornament.* The sense of beauty has always in greater or less degree contributed to determine the look of every kind of utensil—machinery of shelter, food, transportation, etc. According to William Morris ("Hopes and Fears for Art"), this fact is the result of the joy of the producer of these things in his product; and it is, moreover, because under the wage system of modern Europe, this joy has vanished that the goods and chattels of a contemporary civilized householder are in general lacking in any charm of appearance. (Hence we hark back with antique furniture, old iron work, etc., etc., away from the present joylessness of laboring lives.) The development of national and tribal costumes has doubtless been influenced by the sense of beauty in that happy hits of dress have been copied, cleared of their unbecoming accompaniments, the coöperation after this manner of many generations of a people resulting in a type of clothing of æsthetic value. The demand of modern life that many modifications of clothing shall be brought forth by one generation, is one which the æsthetic inventiveness of mankind is entirely unable to meet, and in its fulfillment the sense of beauty is to a good extent inoperative.

§ 67. *Manners.* The conception of elegant manners as a delicate form of beneficence, of a gentleman and a gentlewoman as exponents of goodness in the daily personal relations of life, is a moral and not an æsthetic theory of behavior. Yet it is possible to regard good breeding as a form of the incorporation of beauty, and a gentleman and gentlewoman not as saints, but as artists. While it may be that fine manners are at the same time right action, the beauty of behavior is nevertheless an entirely different thing from its morality. The French phrases, "grand seigneur" and "grande dame," have more æsthetic significance than the corresponding English words: a sign, perhaps, of a stronger sense for rightness of conduct in the Anglo-Saxon consciousness. Social life in the restricted meaning of the meetings of a community for the sake of meeting ("society"), has as its motive neither the gratification of vanity solely (for which Thackeray had so delicate a sense), nor impulses of good will solely (which would appear to be mainly operative where as often in the United States social intercourse is made another side of religious association: church teas, receptions, etc.), nor simply the wish to be amused: (Cf. McAllister's "Society as I have found It.") An æsthetic element enters essentially, the impulse to make a work of art out of the elements offered by simple companionship *en masse*. Amiel writes ("Journal Intime, II." p. 114): "Les réunions choisies travaillent sans le savoir à une sorte de concert des yeux et des oreilles, à une œuvre d'art improvisée. Cette collaboration . . . est une forme de la poésie . . . ." The like æsthetic conception of conversation, not for information, nor edification, nor as an avenue of sympathy, nor an opportunity to shine (se faire valoir), but for the charm inherent in the form a flow of talk may assume, is according to common report chiefly a growth of French soil. (Causerie.) Although Lord Bacon wrote ("Essays," XXXII), "The honorablest part of Talk is to give the Occasion," we still find special conversational powers attributed among English speaking people to those who can only lecture. Considered as a texture of speech woven in common by several interlocutors, a conversation can hardly lay claim to beauty without the observance of some or all of the following rules: (1.) Every participant is to listen during a much longer time than he talks (else he will be lecturer and the other audience.) (2.) The topic is to be changed every few minutes (else to some one it will no longer be productive of idea, or the interest in it will extinguish interest in the manner in which the shuttle of discourse passes from one to another.) (3.) Every subject is to be

treated lightly (else interest may again leave the manner for the matter of the talk). (4.) There is to be no argument (else there will be lecturing, tête-a-tête, vehemence, interruption, suppression, or other mutilation of the form of the conversation). (5.) There is to be little or no anecdote (for, like sweets in a menu, anecdote for the time destroys one's appetite, and if used when a period is not needed, easily results in a capping of stories). (Cf. Disraeli in "Lothair," "The conversation fell into its anecdotage.") (Cf. Dean Swift: "Hints toward an Essay on Conversation.")

§ 68. *Dancing* may be viewed as an exploitation of the beauty there is in human movement in general, or in expressive movement (gesture). Dances exhibit all degrees of the relative prominence of the formal and the expressive (story-telling) element. (Minuet—Pantomime.) An Oriental, in wondering why the Occidentals do not engage others to do their dancing for them, takes the æsthetic view of this species of social play which to the western world is not a form of visual art, but an intoxication of muscular, auditory and amorous elements. (This general subject has been given elaborate discussion by Souriau in his "L'æsthetique du Mouvement," 1889.)

§ 69. *Drama*. The object of the drama may be said to be the incorporation of beauty in representations of the fates of persons. Psychological factors fundamentally involved are the pleasures accompanying both anticipation (*e. g.*, suspense) and satisfaction (*e. g.*, poetic justice). Human plans rendered essentially impossible form subject-matter for tragedy; comedy perhaps generally exhibiting a superficial ruin of purpose which turns out an essential fulfillment. In its tendency toward elaborate perfection of scenic effect, the modern stage presents the spectator with a mixed product, deriving elements both from the art of personal fate (drama) and an art akin to picture. In the operatic plays (Festspiele) of Wagner, the dance and music lend their aid to drama and scenic representation; and in his æsthetic writings a complex art of this form is declared the goal of artistic progress (Schriften, III. p. 115ff., "Das Kunstwerk der Zukunft.") But cf. contra, the remark of Goethe, "One of the most unequivocal signs of the decadence of art is the mixture of different branches of it." Einleitung in die Propyläen. Werke Ed. Cotta, XXIV. p. 219; cf. also the remark following this sentence). (On the drama, cf. Lessing's "Hamburgische Dramaturgie" and Professor Sully's essay thereupon in "Sensation and Intuition.")

§ 70. *Literature*. Written discourse consists of the visual symbolism of a sequence of sound (partly noises or

consonants and partly tones or vowels), which can be analyzed into elementary combinations used as signs of idea among men (words). To be literature this symbolism of significant sound must be an incorporation of beauty, and this it may be either through the sound or its significance, or both. A sequence of sounds may have charm either material (agreeableness of elements; in literature, syllables) or formal (charm of character: in literature, [1] assonance either initial or final=rhyme, [2] rhythm, [3] metre). The opinion that it is verse alone that concerns itself essentially with the auditory charm of discourse, prose having to do with the charm of its ideal content alone, can hardly be maintained. Lotze writes ( "Gesch. der Ästhetik," p. 639) of "a false opposition of metric speech to prose," the former only fulfilling further certain demands of the ear met also by the latter. Heine speaks of the offense given delicate ears by turns, combinations and separations of phrase in prose that belong rightly to poetry. ( "Über L. Börne," I.) The remark of Flaubert (quoted in Bourget's "Essais de Psychologie Contemporaine, I. p. 170), "Les phrases mal faites . . . oppressent la poitrine, gênent les battlements du cœur; et se trouvent ainsi en dehors des conditions de la vie," suggests pleasurable (or unpainful) delivery of discourse as a further element of its charm. The auditory element in the delight of verse is specially appealed to in the work of some contemporary writers: (*e. g.*, Swinburne, later French poets). One ignorant of the Romance languages feels this element of poetic charm alone, and often most intensely in listening to a reading of a master of Italian verse (*e. g.*, Petrarch). A definition of poetry that drops the element of sound for that of sense is contained in J. S. Mill's early essay (1833), "Thoughts on Poetry and its Varieties." It is emotional soliloquy. "Poetry is feeling confessing to itself in moments of solitude" (and differs therefore from eloquence, which is address). That is, although words are the necessary form of incarnation of products of poetry, the poem itself is a certain train of thought interpenetrated by certain emotion, having the character, moreover, that it does not seek to communicate itself. A definition which would seem hospitable to both elements, sensational and intellectual, and which, further, carries in it a reference to moral ideas, is that of Matthew Arnold, who speaks of poetry as "a criticism of life under the conditions fixed for such a criticism by the laws of poetic truth and poetic beauty" (preface to Ward's "English Poets" and elsewhere). The question as to which of these conceptions (or what other) presents to us the true ideal of the art, is an ambiguous one. It may mean: (1)



Which of them can give us the most perfect (or fullest) incarnations of beauty? (2) Which can give us the noblest (embodying moral ideas or producing moral effects) incarnations of beauty? (3) Which conception best expresses the essential nature of those units of discourse the world has hitherto agreed to call poems? (On poetry, cf. the recent minute investigation into the lyric by Professor Werner: "Lyrik und Lyriker," Vol. I. of "Beiträge zur Ästhetik," 1890.) The modern development of the novel has extended the discussion between realism and idealism in art to the domain of the story-teller also. The modern French masters of romance, de Stendhal, Flaubert, de Goncourt, Zola, Maupassant, Bourget, are, in general, conceived as representatives of the former alternative. Yet to Flaubert the material (coté vaudeville) of "Madame Bovary" was indifferent, his purpose being the composition of "quelque chose de gris" as his purpose in *Salammbô* was the presentation of "quelque chose de pourpre" (cf. the flaming idealism of "La Tentation de St. Antoine"). Zola's claim to the title of realist has been disputed, and an idealism of the disagreeable found the phrase more applicable to his art. Maupassant writes: "Le réaliste s'il est artiste cherchera non pas à nous montrer la photographie banale de la vie, mais à nous en donner la vision plus complète, plus saisissante; plus probante que la réalité même" (preface to "Pierre et Jean"): an opinion not far from Goethe's "People say: let artists study nature! but it is no little thing to develop the noble out of the common, beauty out of formlessness:" (*Maximen und Reflexionen*, III. Abth.) In this we may say art simply carries on a work already begun in common observation.

§ 71. *Music*. We may perhaps interpret Mr. Pater's remark that "all art constantly aspires toward the condition of music" ("Studies in the Renaissance: The School of Giorgione") as the expression of the idea that a work of music may be more purely beautiful than the product of any other art. A piece of music needs no excuse but its beauty for its being. Any production of tones for the enjoyment of their relations is music: ("la quale è tutta relativa," Dante, *Convito*, II. Chap. XIV.). Yet its extra-auditory effect may be admitted as an important if not an essential part of the art: ("ancora la musica trae a se gli spiriti umani," *ibid.*) Fundamental in the auditory structure of works of the developed art (*e. g.*, the music of modern Europe) is the fact of scale. A scale is a melody held in the performer's mind, by the production of whose notes without restriction as to how often or in what order in time his performance

proceeds. These generative melodies of music consist ordinarily of notes repeated in octaves, and the number of intervals per octave is in general either five or seven. The reason of this fact has not yet been clearly made out. The XIV. Abschnitt of the *Lehre von den Tonempfindungen* of Helmholtz contains a discussion entitled a Rational Derivation of the Scale, which yet the text indicates is taken not simply as a way in which the five and seven step octave may be, but in which it has been produced. Since this derivation proceeds upon the assumption of a note held in the mind of the performer through the performance which gives rise to the scale (tonality), and since not all primitive music appears to involve this procedure, the latter claim can hardly at present be allowed. For the definite settlement of the question, much fuller and exacter knowledge of the forms assumed by primitive (or simpler) music than we now possess is essential. (This branch of research has received many contributions of late from A. J. Ellis, Baker, Stumpf, Land, the writer, and others. On other facts of the structure of music in pitch: tonality, its history and ethnology, key, modulation, discord and resolution; consult Aristotle *Problemata*, XIX. 36; Bryennios, "Harmonik," quoted by Gevaert; "Histoire et Théorie de la Musique de l'Antiquité," I. 381. Zarlino: "Istitute Armoniche," 1558. Von Winterfeld: "J. Gabrieli und sein Zeitalter," 1834. Hauptmann: "Die Natur der Harmonik und Metrik," 1853. Helmholtz: "Tonempfindungen," 1862, XIV.-XVIII. Abschnitt. Sully: "Sensation and Intuition," 1874. Gurney: "The Power of Sound," 1880. Steinitzer: "Die psychologischen Wirkungen der musikalischen Formen," 1885. Musical forms are discussed in connection with those of other arts by Professor Raymond in "The Genesis of Art-form," 1893.) The discussion of structure of music in time falls under the general doctrine of rhythm and metre: (cf. the great work of Hauptmann above mentioned; Bain: "Emotions and Will," Chap. XIV. 12; Westphal: "Die musikalische Rhythmik seit J. S. Bach," 1880.) In a work of music, relations of tone are combined in a chain of events. (For the perception of the beauty of melodic form, Gurney posits a unique faculty. "Power of Sound," criticised by Professor Sully: *Mind*, XXII., and by Stumpf: "Musik-psychologie in England," *Vierteljahrsschrift für Musikwissenschaft*, 1885.) The changes involved in the sequence are either in pitch (which has but one dimension), in intensity, or in timbre (quality of sound). The textures of notes of which music consists, therefore exemplify, or present us with, general forms of change in concrete instances

of a very simple kind and unincumbered with details: (cf. Lotze: "Grundzüge der Ästhetik," Chap. III.) But any object of contemplation may be what is to the soul not only through the general notions of which it is a concrete case, but through the other concrete cases of the same notions which it may call up before the fancy, as well as through other psychic fact that may be complicated with it or with these suggestions. The distinction between classic and romantic impressiveness is based on the first two of these alternatives. According to Heine ("Religion und Philosophie in Deutschland," Book I.), "the handling is classic when the form of that which is presented to us is completely identical with the conception which it is purposed to present . . . . The handling is romantic when the form does not reveal the idea [to be presented] by identity, but lets it be guessed parabolically." (Cf. also James' "Psychology," Chap. XXV.) The extent and intensity of the extra-auditory effect of music have always excited the wonder and curiosity of civilized man. Three questions are fundamental in the matter: (1) What are the nature and extent of the power of experiences of tone over the rest of the psychic life? (2) What are the sources of this power? (3) Are these elements from psychic domains outside the auditory essential or unessential to the beauty of works of music? The results of an attempt by the writer to make an experimental contribution to the first of these questions are given in a "Report on an experimental test of musical expressiveness," (first published in the AMERICAN JOURNAL OF PSYCHOLOGY, August and October, 1892.) As to the sources of the extra-auditory effects of music, while we may recognize the association of idea (romantic effect) as the main channel, the influence of tone on animals and nervously unhealthy persons can hardly be accounted for on an intellectual formula: (cf. charm of light for insects.) The question as to which element in the impression made by a music, that internal or that external to the auditory sense, contributes mainly (or perhaps exclusively) to its beauty, has been made prominent of late years from the fact that the theoretic writings of R. Wagner can be interpreted in favor of the latter alternative (unquestionably also the popular one). "Tone is the organ of the heart" (Wagner's "Schriften," III. p. 99; cf. H. Spencer's essay on "The Origin and Function of Music," 1857, and "Origin of Music," *Mind*, October, 1890. Cf. also Darwin: "Descent of Man," Part III. Chap. XIX., on "Voice and Musical Powers." Darwin's view discussed by Gurney in the "Power of Sound," Chap. 21; and destructively criticised by Stumpf: "Musik-Psychologie in England," 1885). The

former alternative is represented by E. Hanslick ( "Über das Musikalisch-schöne," 1854). Gurney accepts the classic alternative also, and denies that this internal impressiveness of tone textures is non-emotional: æsthetic emotion of the intensest kind may have a background of auditory presentation pure and simple ( "Power of Sound," and *Mind*, 1884). ( In this discussion, cf. G. Engel: "Æsthetik der Musik," 1884, III. Abschnitt; Saint-Saens: "Harmonie et Melodie," 1885; Hansegger: "Die Musik als Ausdruck," 1887.) On questions of delimitation among the fine arts, a classic authority is the *Laocoön* of Lessing (sub-title, "On the limits of poetry and painting"). (A useful "guide to the literature of æsthetics" has been prepared by Messrs. Gayley and Scott, and is published as No. 11 of the Library Bulletins of the University of California.)

### III.—THEORY OF HABIT.

§ 72. In an abstract of lectures published during 1889-1890, the writer proposed the hypothesis that "the source of all pleasure is the reperformance by the nerves of activities which have once become familiar to them," and that "pain has its source in a violation of nervous habitude." The word *nervous* was here used for simplicity, instead of Fechner's more careful term of "psychophytic process." While any precise hypothesis of the physical conditions of pain and pleasure, advanced at present, may be expected to be incorrect in important respects, yet the attempt to form one is worth making for the sake of the advantage which clearness has, even if mistaken, over confusion of thought. The following more detailed formulation of this notion of the dependence of pain and pleasure upon the repetition of psychophytic change is now proposed.

§ 73. Considering any bodily process as a sequence of state of affairs  $\beta$  upon state of affairs  $\alpha$ , it is assumed (1) If  $\alpha$  is novel to the body which it involves, the occurrence of the process leaves a special trace therein (by which is meant only that the body is different after the process from what it was before, in a way that differs for different processes), which is greater or less according to the intensity of the process, and which continually diminishes and eventually vanishes if it be not repeated. (2) If  $\alpha$  have occurred before in the given body, but only with  $\beta$  as its consequent, the trace of the process if it have disappeared will be renewed, and if it still exist will be increased, thereafter to diminish as before as long as the process does not recur, although, according as it is greater, a greater intensity of the process will be required to give the same increase. (3) If

$\alpha$  has occurred before with other than  $\beta$  as its sequent, the trace resulting will have the character of the greatest of the traces which would have been produced by the occurrence of each of the various processes of which  $\alpha$  has been the inception without the others, and a quantity equal to the difference between that of the greatest and the next smaller. There will then be no trace in the body of any process involving  $\alpha$  as a first term, unless one sequence from it shows a superiority to all others when we take both number, recentness and intensity of occurrence into consideration. It is further assumed that any process which has a trace in a given body is a habit of that body, and that a habit is formed by every recurrence of a process that deepens its trace. Using these postulates, the hypothesis here presented may be expressed as follows: Any presentation correlated with a bodily process that tends to fix a habit (increases a trace), is pleasurable; while any presentation correlated with a bodily process that tends to loosen a habit (decreases a trace), is painful. The latter case is exemplified in the occurrence of any process  $\alpha$ -followed-by-other-than- $\beta$  in a body where the trace  $\alpha$ -followed-by- $\beta$  exists. It is this phenomenon that it is intended in this discussion to denote by the phrase "the thwarting of a habit."

Expressed without the aid of the conception of a trace involved in habit, the principles constituting the hypothesis are as follows: (a) Presentation correlated with psycho-physic event which is novel to the body it concerns, is neither pleasurable nor painful. (b) Presentation correlated with psycho-physic event which is a recurrence in the body it concerns, will, when its outcome has a superiority over any other that has before attended its inception, taking both frequency, recentness and intensity into account, at first be pleasurable (habit forming) and later unattended by pleasure, unless it occur in unusual strength (habit intensified) or after a considerable interval (habit renewed); and it will always be painful when its outcome has an inferiority in the respects named (habit thwarted).

§ 74. If we consider the conception of function to involve that of a repetition of change, and conceive of the nature of a bodily organism as a consensus of function, much of the evidence which has given the doctrine of pleasure as furtherment and pain as hinderment of life, its præëminent hold upon human belief may be claimed in favor of the hypothesis here proposed. (In Plato's "Philebus," Socrates asserts that pain is produced by the disturbance of, and pleasure by the return to, the natural connection between elements of a bodily organism. Cf. Aristippus γένεσις εἰς φύσιν and its contrary: Zeller:

"Geschichte," II. 1, p. 353.) For this evidence will, we may suppose, in large measure consist of cases in which the balking or the intensified performance of a certain course of change which is a familiar recurrence in the organism concerned, is found to be accompanied by pain or pleasure respectively. By the substitution here made of the conception of the habits of an organism for that of its nature, the cases are covered in which pleasure and pain arise, not through the vivification or thwarting of inveterate repetitions (functions, normal activities), but in the earliest recurrences and earliest deviations of psychophysis event.

§ 75. It is the conception of the nature, instead of that of the habits, of the bodily organism which is used in Spinoza's theory of pleasure and pain; pleasure being based on the strengthening of the powers constituting this nature, and pain not upon their thwarted exercise, but their weakening. ("Ethics," III. Prop. VII.: "The endeavor wherewith everything endeavors to persist in its own being is nothing else but the actual essence of the thing in question." Prop. XI.: "Whatsoever increases or diminishes, helps or hinders the power of activity in our body, the idea thereof increases or diminishes, helps or hinders the power of thought of mind." Note: "Thus we can see that the mind can undergo many changes and can pass sometimes to a state of greater perfection, sometimes to a state of lesser perfection. These passive states of transition explain to us the emotions of pleasure and pain. By pleasure, therefore, in the following propositions, I shall signify a passive state wherein the mind passes to a greater perfection.") Aristotle's remarks, that pleasure is the sign of the perfection of an act, as a blooming cheek is of health, appears to involve the conception of the realization of ideals of activity (cf. Zeller: "Geschichte," II. II. Abth. p. 618). In our theory of habit such ideals are posited, but they are defined as those laid down by the past experience of the organism concerned; moreover, it is not every realization of these that is pleasurable, but only such as impress them deeper as habits of the organism. Ideals of life not fleeting like those of habit, but permanent and as numerous as are the types of sentient beings, seem, as we have found, to be postulated in Lotze's theory of pleasure and pain. Another expression of this is as follows: ("Microcosmus," II. Chap. V.) The soul in the course of its varied experiences has the capacity "to realize in pleasure and pain the worth that they have for it, in that they now excite it in the direction of its own nature, and now impress upon it forms and combinations of condition that go counter to the natural course of its activities." On our theory it is not quite cor-

rect to say with Bouillier ("Du Plaisir et de la Douleur," Chap. III.): "Cette tendance fondamentale à persévérer dans l'être, ou cette amour essentielle de soi-même, voilà en effet d'où nous vient tout plaisir, comme aussi toute douleur." What we love, is rather what we are becoming than what we are, although what we hate, to be sure, is dissolution. Like Fechner's theory of stability ("Vorschule," XLIII.), our hypothesis of habit bases pleasure upon repetition: yet a difference of importance in the conceptions used is that while a habitual process is one that is repeated, a stable process is one that repeats itself. The writer realizes, nevertheless, that he has been more influenced in his study of this subject by this suggestion of Fechner's than by any other idea, and hopes that "ein Kern des Richtigen" may be found in both hypotheses. If in the principle which Mr. Spencer makes the foundation of his evolutionary theory of pleasure and pain, viz. that animals tend to perform whatever activities are pleasurable to them ("Psych." I. Section 125), we take the word activity in a wide sense, as bodily change in general, the assertion becomes, according to the present hypothesis, in a measure, the converse of the truth of the matter. This is that whatever activities animals tend to perform are in the direction of pleasure to them. A like principle of the dependence of habit on pleasure (and not pleasure on habit as in our hypothesis) is thus stated by Mr. Hodgson ("Theory of Practice," Book I. Chap. I. Section 2): ". . . pleasures and pains stand to actions and consequent habits, in the relation of cause to effect, so that, in studying pleasures and pains we are studying actions and habits at their source, and in studying actions and habits, we are studying pleasures and pains in their stream." If we take activity, again, to mean bodily change in general (which undoubtedly it does not in this passage), this assertion is another expression of the converse of the hypothesis here proposed, and becomes a formulation of it, by giving each member of the pairs of words, cause and effect, stream and source, the other's place. Understanding by the term habit motor phenomena only, these statements are not the converse of the theory here proposed, but express a principle of narrower scope.

§ 76. This theory basing pleasure on habituation, and pain upon dehabituation, has been in the writer's mind in forming all the special hypotheses advanced in the course of the foregoing survey of the field of pain and pleasure. Bodily functions being fixed habitudes, would not in general contribute pleasure to consciousness unless when exceptionally intense, (*e. g.*, our occasional feelings of exuberant health, particularly in youth: Mantegazza: "Fis. del Piacere," Chap. II.); or

when the system were re-creating itself (joy of function after privation, physical bliss of convalescence). In so far as physical pain is the result of consciousness of stimuli extraordinarily great (intense or extensive), their explanation on this theory involves the conception of a resulting large interference with nervous functioning. Of the physical basis of forms of pain apparently involving no great bodily disturbance (qualms, twinge of neuralgia), we have no conception to confront with any psychological theory of the disagreeable. (Yet it is natural to think of a neuralgia as physically a disordered process: "molecularsturm"—Du Bois-Reymond.) Present views as to the nervous basis of other forms of sensation are likewise too vague to afford decided evidence. There is little foothold for such a conception as that of regularity and irregularity of vibration beyond the sense of hearing: and the propriety of its application even here is not as yet made clear. We have already noted (Section 40f.) the wide applicability of the ideas of hindered and successful process to the explanation of pain and pleasure in the ideal sphere. Among morbid conditions, it is apparently the quickened and intensified performance of mental function (*e. g.*, association) with what it signifies in the body as a whole that is the cause of the bliss of mania, and its morbidly halting and interrupted performance with the general bodily hinderment accompanying, that produces the misery of melancholy. A possible explanation of the tendency toward pleasure of the states above called onirotic is, as noted, that the brain activities therein are isolated (and therefore uninterrupted), and intensified (and therefore pleasurable), following-out of psycho-physic habitudes, often such as are brought into the focus of consciousness only in those exceptional states. Narcosis, we can say, lets us know what heights the pleasures of creation may reach when the pains of dissolution no longer, as in common life, prevent their summation.

§ 77. The principle assumed by Mach ("Die Symmetrie," 1872), that the repetition of a visual experience is in the direction of pleasure, gives an illustration of the present theory in the field of aesthetics. (An agreeable pattern emerges from the repetition of any accidental blotch on paper. Cf. Bain: "Emotions," Chap. XIV. Section 18). Thematic treatment in music, the use of typical forms in architecture are further applications of the principle. Speaking of the aqueducts of the Roman Campagna, the President De Brosses writes: "C'est fort peu de chose que chacun de ces arcades de briques prise en soi, mais vous ne sauriez croire combien en fait d'architecture la quantité de choses médiocres, soit piliers, pilastres ou colonnes rassemblées en grand nombre produit un bel



effet." ("Letters d'Italie, 1739-40.") In his essay on "the Poet," Emerson writes, "A rhyme in one of our sonnets should not be less pleasing than the iterated nodes of a sea shell or the resembling difference of a group of flowers." The fact that there must in general be differentiation in order to make repetition a pleasure (recognition of the familiar amid the strange; cf. Simile), may be harmonized with the theory of habit, both by the consideration that in accordance therewith anything that served to make a repetition more impressive would tend toward its pleasurable; and by a principle (for which we get the suggestion from Fechner: "Schöpfungsgeschichte," XI. Zusatz) that the performance of any one bodily activity eventually interferes with the perfect performance of contemporaneous functions. Of this latter principle the good effects of alterative treatment in therapeutics may perhaps afford an illustration. To explain any positive pain there may be in the wearisomeness of frequent repetition, some principle of this kind would be needed (*i. e.*, a resulting defective functioning somewhere); but an eventual decline in the pleasurable of a repeated experience is a part of our theory itself. Perhaps in many cases the clear recognition of an experience may be taken as a sign of its fixation as a habit, *i. e.*, what we are able to recognize as repeated may often be past the pleasure-giving point. Familiarity is made an essential of æsthetic appreciation by Taine: "Rien de plus vrai que ce mot: l'art est le resume de la vie." ("Voyage en Italie," p. 136); "Toujours lorsqu'un art regne l'esprit des contemporains en contient les elements propres . . ." (p. 177): so formerly sculpture was born of daily familiarity with the sight of naked limbs (p. 50). This principle is likewise referred to by Darwin as the key to the æsthetic preferences of primitive races ("Descent of Man," Chap. XIX.). In the matter of personal beauty, "the general truth of the principle long ago insisted upon by Humboldt, that man admires and often tries to exaggerate whatever characters nature may have given him, is shown in many ways;" or in other words, "the men of each race prefer what they are accustomed to; they cannot endure any great change, but they like variety and admire each characteristic carried to a moderate extreme." An important place is generally assigned in æsthetic discussion to the principle of the unification of a manifold (Cf. Fechner: "Vorschule," VI.). The pleasurable of this mental process may on the present theory be interpreted as the result of the fact that in the unifying conception, we have a framework of anticipation in mind which all the parts of the manifold contemplated contribute to satisfy, the nervous excitement accompanying the vague existence of this tending to

make the carrying out of the processes of representation (on the nervous side, nervous habitudes) involved in this satisfaction a process of the deepening of these habits.

§ 78. The manifestations in political and social affairs of the love of the habitual and the distaste with that which interferes with it, are referred to by Sir H. S. Maine in his "Popular Government" (1886). "Men do alter their habits, but within narrow limits, and almost always with more or less of reluctance and pain" (p. 137). There is "a weariness of novelty which seems at intervals to overtake whole western societies" (p. 194). The conception of Barbarian was to all appearance originally "founded on nothing more than dislike of differences of speech" (p. 139). (To all who are conversant with German, *Schweizerdeutsch* appears as a corruption; yet the writer was once told by a Swiss that few foreigners were able to speak it "with the correct accent.") In fashions "something like real genius is called into activity . . . in order that something shall be devised which is new and yet which shall not shock the strong attachment to the old" (p. 141). (For further discussions turning upon the ideas of recurrence and familiarity, cf. S. Butler: "Life and Habit," 1878; G. Tarde: "*Les lois de l'imitation*," 1890.)

§ 79. A further item of evidence for our theory of habituation may be found in the fact that youth, the season of the formation of habit, is also the season of keenest enjoyment. There should be, then, a youthfulness of type found in those natures which are specially susceptible to joy: the voluptuaries, the artists, the poets. Dante appears to note this in his own case: "*Io, che pur di mia natura, trasmutabile son per tutte guise.*" ("Paradiso," V. 98.9.) According to our theory the charm of vivid experiences, even if they contain an element of the painful (as in the tragedies of life and art), lies in the fact that the habits of the organism whose performance is involved therein are graven deeper through their intensity. Such experiences are literally recreations, since the process that has made us what we are is carried further in them.

§ 80. It may be that what there is of truth in this hypothesis is more fundamental than has yet been indicated. If that which constitutes an object is a habitude of presentation, then the creation of an object may be conceived as the formation of a habitude of presentation. The creative principle in the universe becomes, then, its principle of pleasure as well.

“Ciò che non muore e ciò che può morire  
Non è se non splendor di quella Idea  
Che partorisce, amando, il nostro Sire.”

(Dante: “Paradiso,” XIII. 52.)

With these attributes of foundation of reality and source of joy, the conviction of Christendom has combined a third, that of arbiter of right. In the doctrine of the Trinity may be seen an expression of faith in the personality of Deity. For a person is resolve and feeling and idea ; and while these three are one—his resolve, his feeling and his idea—yet resolve is not feeling, nor feeling idea, nor idea resolve.